Medical Times

Vol. 65 AUGUST, 1937 No. 8

BE CERTAIN YOUR PATIENT'S *calcium intake* IS ADEQUATE

It is particularly desirable that pregnant women and growing children should receive adequate amounts of calcium, phosphorus and Vitamin D in order to build and maintain good bone and tooth structure and to prevent the development of any signs of calcium deficiency. Since the mineral content of the ordinary diet provides much less than optimum amounts of these elements, particularly for such individuals, the administration of a supplementary source of them is advisable.

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Editorials

Prussian Bugles

THE *New York Medical Week*, official organ of the Medical Society of the County of New York, in its issue of June 26, remarks editorially that "Although President Roosevelt has invited the American Medical Association to help formulate a federal health policy in accord with professional principles, there is little doubt that an attempt will be made to amend the Social Security Act to include health insurance."

United States Senator Lewis, in his recent speech at the Atlantic City meeting of the American Medical Association, gave the strongest possible intimations, as a spokesman for the President, that momentous activities were in full swing under the surface of things.

Is the day near when, as in Alsace on the morning of that day in 1871 signalized by the Prussian military occupation and described by the schoolboy who tells the story of Alphonse Daudet's "The Last Lesson" ("La Dernière Classe"), we also shall realize that a new language and culture must be acquired and sacred traditions and high standards emasculated or discarded?

> Suddenly the church clock struck twelve, and then the Angelus was heard.
>
> At the same moment, a trumpet blast under our window announced that the Prussians were returning from drill. Monsieur Hamel [the schoolmaster] rose in his chair. He was very pale, but never before had he seemed to me so tall as at that moment.
>
> "My friends—" he said, "my friends—I—I—"
>
> But something choked him. He could not finish his sentence.
>
> Then he took a piece of chalk, and grasping it with all his strength, wrote in his largest hand,—
>
> "VIVE LA FRANCE!"
>
> He remained standing at the blackboard, his head resting against the wall. He did not speak again, but a motion of his hand said to us,—
>
> "That is all. You are dismissed."

Strategy Against the Toll of the Automobile

THE extravagances of government being what they are, and politicians too short-sighted even to see that armament costs really divert vast sums that they might otherwise squander, it is altogether probable that insufficient income tax receipts will sooner or later have to be supplemented by a national lottery. In that case, it should be possible to turn such a device to useful account. What we have in mind is the limitation of lottery prizes to persons with clean traffic records. This would be good preventive medicine with respect to automobile holocausts.

The "10¾ Seconds" Germ Killer

TUNE in and get all the dope on germ killing. The public gets a bellyful of it daily. Announcers bubble over with "information" on how colds are developed and cured. So much information and so much of it worthless. A family of six, $15.00 a week wages, note that they use a dollar's worth of a widely advertised gargle to prevent the children from getting colds. This money spent on good food might help. Why not protect the public against such stuff?

M. W. T.

Seeds That Grow

IN 1912, Dr. Abraham Jacobi, Father of Pediatrics, spoke favorably about birth control in his presidential address before the American Medical Association. When past 80, Jacobi had a very keen mind and he was quite as up-to-date in his medicine as most recent graduates.

M. W. T.

Just Type Your Politician

A curious piece of news comes out of Japan by way of the Associated Press. Dr. Tsunemasa Niigaki, medical adviser to the Foreign Office, is alleged to have urged his government to pick its diplomats by blood type—the "O" kind. The press story credits him with the statement that this type of blood characterizes superior men, the only ones

fitted to fight Japan's battles. Such men, it appears, are level-headed; they make quick and unerring decisions; perseverance and a gentle mien cloaking an iron will mark them notably. The blood type test is declared to be completely scientific and not like fortune-telling. Dr. Niigaki is quoted as saying that "Japan no longer wants pale, anemic, genius-type fellows in the government, but robust chaps who are vigorous and full-blooded."

This simplifies matters greatly and we may expect to see the new criterion established at once in our own country. The new method will do away with the expense and useless excitement of elections for high public office and will determine fitness for entrance or promotion in the army and navy. We think it should be applied to university chairs and the "key" positions in medicine. There is no good reason why it should be limited to diplomats.

The burning question at present is: have any of our eminent politicians fooled us? Is any one holding very high and responsible office with nothing but a wretched "A", "B", or "AB" type of blood? The more we think about this question the more disturbed we become. It is a much more important matter than income tax evasions.

Is it possible that the Japanese savant who has taken this dogmatic position may be mistaken? It seems too good to be true. Let us pray that his findings will be sustained.

What Is Ahead of Us?

PROFESSOR Lancelot Hogben, in his Fabian Lecture [*What Is Ahead Of Us?* (Macmillan)], thinks the scientific prospects of human survival very poor. Our industrialized civilization is menaced. Race suicide is in our blood and unconscious minds. Fertility is decreasing. A potential of sterility is coming into action at an accelerating rate of speed. Racial extinction looms.

Although the world's goods and services could easily support larger populations, the birth rate seems "unaware" of the fact. As the drivers of the cars leading to racial annihilation approach the precipice with all brakes off, says Professor Hogben, they can, if they wish, take in the pleasant scenic view of what might be. But they are hell bent, so to say, and are running amuck in their attempts to palliate immediate evils instead of trying to change the dreadful order of things.

In about a hundred years a country like England will have suffered a reduction in its population of fifty per cent if births and deaths remain at their present level. If, however, the rate of downward acceleration follows the pattern of the last twenty years, then England will have a population one-tenth its present size in a hundred years.

One would think, who studies the philosophy of population prevailing today, that all danger resided in a heavy birth rate and none at all in an accelerating low rate. This prevailing philosophy is a vain and delusory thing. The real danger lies in neglecting to stem the tide of race suicide by a more normal manner of living, which would involve among other things deurbanization, adequate housing, the conquest of gonorrhea, and the substitution of the satisfaction brought by parenthood for the gold brick of commercialized entertainment which the people have been trained to believe they must purchase. It all spells, of course, a gigantic racket and sucker game.

Professor Hogben does not believe the remedy lies in resisting the shallow birth-control cult, by outlawing contraceptives, and by giving subsidies for motherhood. The real problems confronting us are furnished by urban congestion (involving a doubling or trebling of the cost of raising a child over what it is in the country), housing, the commercialization of "life," child labor, the industrial drafting of women, instability of marriage, the low initial earnings of people, and gonorrheal infection.

Even socialization, with its predicated spreading of purchasing power due to fair sharing of the total production, will be of no service, if there is no mankind left to be served. And anyway, says Professor Hogben, if socialism should be applied and work out as merely a new base for the capitalist elements responsible for the present trend toward sterility, it would be simply one more mirage.

In the meantime, the babies that do succeed in getting themselves born into

the middle class, once upon a time the backbone of society, are problem children from birth, 80 per cent of one group studied characterized by bottle feeding, anorexia, habitual vomiting, and neurosis (Bikoff). Their urbanized mothers are highly neurotic smokers with minds made up on the score of nursing. Reproduction on their part, in any case, is, in the words of Professor Hogben, "an unwarranted intrusion of hospital practice on the orderly routine of a mechanized existence." With them, two children would constitute a very large family; Professor Hogben's postulated family of three or four would be unthinkable to the women who furnish such a large quota of the feminine type recently studied by Raymond Pearl (*J. A. M. A.* 108:1385, April 24, 1937)—women who are deliberately causing from one-sixth to more than one-fifth of their aggregate reproductive wastage; by so doing voluntarily taking one of the most serious risks to their very lives as well as to their future health and well being that a woman can take short of suicide or major self mutilation; paying taxes to "support" an intensive public health program of keeping babies alive and in good health; calling promptly on the abortionist to rectify the inadequacies of birth control; acting with precision "on the lower levels of behavioristic psychology."

What, indeed, is ahead of us? H. G. Wells has recently made an arresting suggestion; he, of course, still has faith in man's ability to promote and guide his own further evolution and has also come to believe that this is a purposeful universe and not a meaningless accident involving a hopelessly stupid and cruel race of beings. Wells now says that we are living in a lunatic asylum crowded with patients who are afraid to go sane; the remedy: "A world gone sane."

The Medical Scientist and the Press

THE members of the National Association of Science Writers are going to make it increasingly difficult for medical work of great moment to escape early publicity. But we can feel greater reassurance on this point than ever before, because of the broad scientific and literary training and high character of the writers now concerned in this field—themselves professional men with much the same point of view of these things as ourselves.

Nevertheless, there is greater need than ever before for circumspection in these ballyhoo days. The interests of the sick and the to-be-sick are paramount to all other considerations.

News is news, but in so far as the slightest element of ballyhoo enters into medical news, medicine and the patient are always set back. The profession as a whole is immediately prejudiced against any medical measure bearing the slightest mark of exploitation; that retards the advance of truth, and whatever retards truth is indubitably evil. The effect sought, enthusiastic reception and application on a large scale, is nipped in the bud effectually. And ninety-nine times out of one hundred, this is what the heralded "discovery" deserves. Experience has proved this. For one pernicious anemia or Aschheim-Zondek triumph there are ninety-nine duds.

Why should a man who has given something really great to the profession at a proper time and through regular channels of intercourse with his brethren be photographed and subjected to a barrage of questions? Such a situation reduces itself, inevitably, to news about him; that is what the public is curious about. The fact that the ballyhoo type of newspaper man wants to get "news" to this kind of public, caring nothing about the dashing of false hopes, can have no meaning for the medical profession. Even if these things were to take place, why should they be staged *before* the new knowledge is transmitted to the profession, not to say confirmed? That is the chief sin of the press; it wants to have a representative in the laboratory, clinic, hospital ward or operating room, with all the resources of the pictorial art, when Dr. Mudge turns up something that is "news." When Dr. Mudge finds that diabetics can metabolize the carbohydrate of the banana without glycosuria resulting, he is expected to reach for the telephone and call up the Associated Press. Six months later, with his material well digested, he may read his paper before the Federal (!) Academy of Medicine. Probably by that time there will be no great interest in it, if it is like most prematurely pub-

licized contributions, if indeed its findings have not been controverted and discredited.

The time for the newspapers to be given medical news without stint, by responsible and impartial agents of organized medicine, is after the information has gone through regular professional channels and been confirmed and properly evaluated.

Mendel's studies in heredity and Behring's work in diphtheria immunization were not subjected to ballyhoo and the revolutions ultimately worked by them were thereby insured in the fullness of time. There were no *Morning* and *Evening Journal* then and no "picture papers" for the illiterate.

No harm can possibly be done by pursuing a proper course—no harm to the press, no harm to scientific medicine, no harm to the sick, and no harm to truth. When an opposite course is pursued, and harm done thereby, as is practically always the case, it is not the press that is at fault, but some medical egotist whom the profession and the sick could just as well do without.

We may not fully understand the newspaper's true function. Certainly Mr. Howard W. Blakeslee of the Associated Press, in his recent address before the Medical College of Virginia, did not betray any great understanding of medicine when he declared that "Newspapers will not follow medical precedents" and that they will not confine themselves "to those items which the physicians would select." Does not Mr. Blakeslee himself, although typifying the most enlightened wing of his profession, justify our warning as to circumspection? If our misunderstanding of the press is as great as his misunderstanding of medicine some sort of *rapprochement* is in order.

It seems to us that the medical press bureaus have done good work and that their methods point the way that the press must go—a way that they should learn to like, since their interest in the welfare of science and the sick is sincere. The present service of the press in the cause of public health is of incalculable value.

Nobody hates a medical fraud or pities a medical fool quite so much as the modern newspaper man. He knows exactly what these things mean. And he knows perfectly well that the better type of medical men are invulnerable with respect to the standards in question. He knows that, in the words of Dr. Edwin H. Shepard of Syracuse, they can always be counted upon to "sacrifice their claim to individual preferment to the greater claim of benefit to the public at large," strange and almost incredible as this adherence to unselfish principles may in these days seem to others.

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BLOOD STUDIES

E. W. PERNOKIS, Chicago (*Journal A. M. A.*, May 15, 1937), summarizes the results obtained from examination of the blood of 2,728 consecutive patients reporting to the blood clinic of the Central Free Dispensary, Rush Medical College, Chicago, from April 1, 1933, to Aug. 1, 1936. A complete blood count was done on every patient reporting to the clinic. Of the total number of patients who reported to the clinic 6.5 per cent showed blood dyscrasias, while the others were sent there by the physician in charge to get aid in making the diagnosis in question. Fifty per cent of the cases with infections and general systemic diseases showed an anemia, while 25 per cent of each group showed a leukocytosis. Lymphocytosis was present in 20 per cent of the infections and 25 per cent of the systemic diseases. The monocytes were increased in 12 per cent of the infections and 5 per cent of the systemic diseases, while the eosinophils were increased in 3.4 per cent of the infections and 1.3 per cent of the systemic diseases. There were no cases of agranulocytic angina or acute infectious mononucleosis. In none of the 100 cases of arthritis in which aminopyrine and phenobarbital had been administered was there a case of leukopenia noted. Averages of the blood counts and differential values in the various groups fail to demonstrate the individual differences seen in separate counts.

RECENT RESULTS IN THE STUDY OF *Gonorrhea*

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IN contrast to the marked reduction in the incidence of syphilis in the last decade, the number of cases of gonorrhea remains the same or approximately the same. The study of gonorrhea has not yet yielded results of the same importance as the recent researches on syphilis. The reason for this may well be that there is no laboratory animal that has been found that can be infected with gonorrhea; no one has succeeded in producing true gonorrhea in any animal.

Research work on gonorrhea has followed somewhat different paths in America and in Central Europe; therefore a brief but comprehensive description of the situation in Europe is given here.

Bacterial cultures are given the first place in the diagnosis of gonorrhea—especially in the female. The value of the culture is not due so much to its superiority over the smear examination as to the fact that a positive culture is 100 per cent. proof of the presence of gonorrhea.

The Müller-Oppenheim complement fixation test is also of definite value in the diagnosis of gonorrhea. It is regarded as a specific reaction, as there are very few non-specific reactions, except that syphilitic sera may give a false positive. This test is of special value in diagnosis in cases of long-standing disease of the adnexa, in prostatic abscess, in arthritis of unknown origin (a late form of gonorrheal arthritis has been recently described), and in other complications and sequelae of gonorrheal infection. On the other hand, the value of the complement-fixation test as a criterion of cure of gonorrhea has not yet been demonstrated.

Roentgenological procedures are also of definite diagnostic value in many cases of gonorrhea.

A cutaneous test is being sought, but as yet it has not been possible to obtain a reaction sufficiently specific to be of practical diagnostic value.

THE diagnostic difficulties are not the chief hindrance in gonorrheal research; but treatment has not yet been brought to the point where it can successfully block the progress of this plague.

The opinion that the old local treatment of gonorrhea is insufficient has gained increasing support in the last decade; but more effective antigonorrheics than the silver salts have not yet been found. Dozens of silver preparations have been put on the market, but no real progress has been made since protargol was discovered. The silver preparations are effective only for prophylaxis and abortive treatment; they give good results in only 50 per cent. of cases if employed in the first twenty-four hours after the appearance of the clinical symptoms. If the infection is older, the gonococci have penetrated deeply into the epithelium, and because of the superficial action of all known antigonorrheics, the fight against these organisms becomes a siege. The old be-

From the Clinic of Dermatology and Syphilology of the University of Innsbruck (Professor Leo Kumer, Director).

lief in the effectiveness of five or ten minute injections of silver salt solutions has been shattered; Lomholt has recently drawn attention to the fact that these prolonged injections do not achieve their purpose, for the silver is precipitated from the solution after one minute at the latest. According to Lomholt injections of one minute each, repeated three times, are much more effective. The insufficiency of injections in the treatment of gonorrhea has led to the use of other methods for bringing the drugs into contact with the infected tissues, such as powders, suppositories that swell and melt, gaseous forms, salves, urethral tampons, celluloid cervix caps, etc. These minor, though often valuable, improvements have not resulted in a fundamental change in treatment.

ONE need only study the anatomy of the urethral glands to realize that drugs applied locally can never penetrate their recesses. However, it is possible to overcome gonorrheal infection of the urethral glands by massage with sounds dilatation and syringing, or destruction of the glands through the urethroscope.

On the other hand, gonococci in the epididymis, the prostate, and the seminal vesicles are entirely out of reach by local treatment. The epididymis is able to take care of any invading gonococci, and recurrence from this source is not to be feared; it is different in the case of the prostate and the seminal vesicles. The usual method of treatment of prostatic gonorrhea by massage has been recently attacked by Stutzin. We can agree with him that it is a universal rule in medicine that rest is necessary in inflammatory disease in any organ. But the undesirable results of prostatic massages as portrayed by Stutzin are avoided if massage is used carefully and only after the inflammation has subsided. In addition to local application of heat (Arzberger apparatus, diathermy, the short wave, etc.), massage of the prostate is the only means of local treatment of this organ, and the value of this method has been recognized for many decades.

LOCAL treatment is much more hopeless in gonorrhea of the seminal vesicles; heat and massage are far less effective than in infection of the prostate. How hopeless local treatment is, is indicated by the suggestion that the vas deferens should be opened to permit syringing; this procedure has, indeed, been carried out in hundreds of cases. But we cannot approve this method.

The situation is even more difficult in gonorrhea in the female; the mucosa of the cervix has many more recesses than that of the male urethra; and the injection of antigonorrheic solutions into the uterus and tubes is attended with many dangers. Here also surgical procedures have been advised; several authors recommend electrocauterization of the cervix, even curettage of the uterus.

SOME progress has been made in the local treatment of gonorrhea in women by the use of an acridine preparation containing arsenic, called flavadin. This is injected, in a 2 per cent. aqueous solution, into the cervical canal by means of a specially constructed syringe. The chief advantage of flavadin over the silver preparations is that it shortens the duration of the treatment (10 to 20 injections). We have been able to verify the value of flavadin treatment in about 200 cases of cervical gonorrhea. This method, however, is not necessarily effective in preventing the ascent of the gonococcal infection; and an adnexitis may occasionally be produced. Erosion of the cervix is a not infrequent occurrence; bleeding from the uterus caused by irritation may occur; and occasionally a state of collapse from peritoneal irritation may be observed. The originally very favorable reports on this procedure in the literature have now been replaced by a more critical attitude. In urethral gonorrhea, flavadin is not superior to the silver salts.

THE conviction is growing that the anatomical structure of the male and female genitals makes a thoroughly satisfactory local treatment impossible, and hence the more recent research is concerned chiefly with methods of general treatment.

The idea of administering a medicament that kills or inhibits the growth of gonococci by mouth, or subcutaneously, or intravenously, has been strengthened by the successful results in the treat-

ment of syphilis with salvarsan. Acridine dyes have been tested by many investigators, but results have not fulfilled their expectations. Opinions in regard to the methods of carrying out acridine therapy are divergent, and there is an equal lack of agreement in regard to the indications for its use. It is also to be noted, that contrary to the general belief that acridine therapy is not dangerous, a few deaths have been reported.

The recent revival of experiments with an anti-gonococcus serum has been unsuccessful.

One of the most important methods of general treatment in gonorrhea is vaccine therapy, which has recently been modified in various ways. Mulzer and Keining have used large doses of vaccine as a form of fever therapy in imitation of malarial therapy (maximum dose vaccine-fever-therapy); they claim to have attained a marked shortening of the course of the disease. The chief indication for this treatment is the presence of closed focal gonorrheal lesions.

IN the last decade several methods of local vaccine treatment have been introduced. The most widely used is the Bucura method, *i.e.*, the submucosal injection of comparatively large amounts of vaccine at the site of the lesion (cervix, Bartholin's glands, rectum, etc.). A considerable reaction, usually accompanied by chills, occurs soon after the injection. The minimum number of injections given is two, the maximum, eight. This method is suitable only for superficial gonorrheal lesions, which do not respond to general vaccine treatment, such as urethritis, para-urethritis, cervicitis, and also for gonorrheal arthritis. Bucura and his followers claim 90 to 100 per cent. cures in the cases treated by this method, but often the treatment takes four to five months. Our own results lead us to recommend this method.

A very similar procedure has been described by Basset and Poincloux, as *vaccination régionale par la porte d'entrée*. This method is designed to inhibit the progress of the disease and effect a cure by submucosal injection of vaccine at the portal of entry, even when the lesions at this site have healed; this distinguishes it from the Bucura method. As with Bucura's method, a severe general reaction develops soon after the injection. Opinions are divided as to whether this method represents a specific treatment or is in the nature of a non-specific shock treatment; there is also no agreement as to the indications for this treatment. There is, as well, much difference of opinion in regard to its value; some are enthusiastic about it; others deny that it has any value whatever. The average number of injections given is five to six; many cases require eight to twelve; the treatment, therefore, is of comparatively long duration.

AN entirely new method of vaccine treatment was described by Loeser in 1923, which consists in the subcutaneous injection of living gonococci. Loeser advocates this procedure on the theory that the skin is a "transformer" for the formation of immunizing substances; according to this theory, when the living gonococci remain in the subcutaneous tissues for a long time, antibodies, produced by the strife between the organisms and the tissues, are released continuously for a long period.

The treatment with living vaccine is undertaken with reluctance, yet the danger that may be feared—that distant metastases or sepsis may result from the injection of living gonococci—does not, as a matter of fact, materialize. Often a harmless abscess containing living gonococci develops at the site of the injection. An advantage of the living vaccine method over other methods of vaccine treatment is that it usually causes no general and no focal reaction; fever and other general symptoms are of rare occurrence; this treatment can, therefore, be carried out with ambulatory patients. The chief advantage of the living vaccine method is that results are obtained promptly after one to three injections, that is, in about fourteen days.

THE indications for this form of treatment are restricted: Cervical gonorrhea, when there is no inflammation of the adnexa; and deepseated parenchymatous lesions, especially complications in the female genitals, and arthritis. Numerous reports have been published of the complete disappearance of gon-

ococci in two weeks in a considerable percentage (up to 75 per cent.) of cases of cervical gonorrhea; gonorrheal complications in the male respond more slowly and less constantly. Our own experience with this method covers 60 cases of cervical gonorrhea; no ill effects were observed, except an occasional local abscess at the site of the injection. The rapid and certain cure reported by others was obtained in only a small percentage of our cases; this may possibly be due to the fact that for the best results the vaccine should be prepared by mixing 5 different strains of gonococci "not too old and not too young," which are not always available.

IN the first few years after the war the Wagner-Jauregg method of malarial treatment of syphilis came into widespread use, and its good effect on an associated gonorrhea was often observed. The suggestion was therefore made that it be used for the treatment of gonorrhea alone. This method of treatment is gaining ground because of the certainty and rapidity with which results are obtained, yet it must be admitted that a considerable number of clinicians refuse to use it, because they fear that it may be harmful. This is easily understood. In large cities a prolonged ambulatory treatment of gonorrhea can be carried out; but in rural districts and small cities, this is not the case. Ambulatory treatment is not possible, and the hospitals to which these patients are admitted are compelled to adopt the method which will ensure the most rapid and certain cure of gonorrhea. With careful techinque, strict observance of contra-indications, and interruption of the fever at the slightest signs of danger, malarial therapy can be carried out without any untoward incident. No better witness can be called to give an opinion on malarial therapy than Wagner-Jauregg, who writes: "The danger of malarial therapy is now a matter of history." For many years most cases of gonorrhea in women at our Clinic—when there is no contra-indication—have been treated by malarial therapy. In the meantime we have tried all other new methods of treatment for gonorrhea; they have all been regarded by the patients as more unpleasant than the malarial treatment. The indications for these various methods have been limited; they are not entirely free from danger, and above all, their results are uncertain and they require much more time than malarial treatment. Among more than 500 patients treated with malarial therapy, there has been no complication of the treatment that we could not control. The choice of the malaria strain employed is important; we employ a strain from non-syphilitic blood carried through cultures for twenty years, which produces only comparatively mild reactions. The disadvantages of this treatment are that it can only be carried out in the hospital, and that it is effective only once.

AS most other authors, we were of the opinion at first that the height and duration of the fever determined the therapeutic results, and we induced ten to twelve malarial attacks. Soon it was found that the same results could be obtained with six or seven attacks. The effective action of malarial therapy does not depend upon the height of the temperature alone, but on other processes, such as destruction of blood cells, loss of weight, etc., that can be designated as "retuning" of the body. By reducing the number of attacks, the dangers of malarial therapy are decidedly reduced, as experience has shown that the first febrile attacks are comparatively better tolerated than the later attacks. We avoid all local treatment before and during the course of malarial treatment, and require six days of complete bed rest after the subsidence of the last attack of fever. If primarily successful, therefore, the malarial treatment does not require more than three to four weeks' stay in the hospital.

We can report 300 cases of gonorrhea in the female treated by malarial therapy, of which we have adequate records; of these 66 per cent. were relieved of symptoms and bacteriologically negative immediately after the course of malarial treatment; in another 18.7 per cent., all signs of gonorrheal infection disappeared in the first or second week after completion of the malarial treatment. This gives 84.7 per cent. cures in this series. Urethral gonorrhea responded less readily than cervical lesions. The duration

of the infection had but little effect on the result. Of the 96 cases of adnexal disease treated, many showed good results with relief of symptoms; a few showed an exacerbation; occasionally involvement of the adnexa became manifest during the treatment. From the point of view of the gynecologist, malarial therapy is to be recommended because of its effect on the adnexa. Pregnancy is regarded as a contra-indication for malarial treatment as it may induce abortion.

THE indications for malarial treatment in gonorrhea in the male are quite different. In most of these cases, one can get along with local treatment and vaccine therapy—in spite of their inadequacy. But the good results of malarial therapy, in female gonorrhea, induced us to use it in the fight against the disease in men, when the usual methods of treatment failed, or when the infection had persisted for months or years. Our 100 cases of male gonorrhea treated with malarial therapy, therefore, represent the worst possible material. The results were as follows: 72 per cent. were symptom free and bacteriologically negative immediately after the course of malarial treatment; another 11 per cent. cured in one to two weeks; thus, 83 per cent. cures. The cases in which the treatment failed included those with and without complications, so that the cause of failure is not to be found in the presence of complications.

The figures given in the literature in regard to results of malarial therapy show from 70 to 96 per cent. of cures in thirty-six to fifty-five days.

ATTEMPTS have repeatedly been made to substitute other less dangerous forms of fever therapy for malarial therapy, such as: Maximum dose vaccine-fever-therapy (Mulzer and Keining), pyrifer (a fever-producing protein preparation from bacteria of the *B. coli* group), milk injections (Loeb and others). All of these methods cause the patients more discomfort than malarial therapy; they are not entirely free from danger; and according to our own experience, they give a much smaller percentage of definite cures than malarial therapy. We have had no experience with the Kettering hypotherm designed in America for fever therapy. We have every reason to believe, however, that the destruction of gonococci in the human body is less a physical than a biological problem; the local heat treatment of gonorrhea is not, by any means, always successful.

THE cure of gonorrhea by the present methods of local treatment is due chiefly to the defense mechanism of the body itself. The complicated anatomical construction of the male and female genitals makes it almost impossible to devise a thoroughly satisfactory local treatment. In the last few years, the balance has shifted more and more in favor of general treatment—especially for gonorrhea in the female.

Of the newer methods of treatment, the most widely used are: Injection of a dye, flavadin, into the cervical canal; the intravenous and peroral administration of acridine dyes. In addition to the older well-known methods of intramuscular and intravenous injections of vaccine, the submucosal injection of vaccine at the site of the lesion (Bucura), or at the portal of entry (Basset and Poincloux), appears to have proved its value. While the latter methods cause considerable reaction, the subcutaneous injection of living gonococci (Loeser's living vaccine) causes no reactions as a rule, and is therefore adapted to ambulatory treatment. Reports in the literature indicate that the duration of treatment can be markedly shortened by the use of living vaccine. Among the methods of fever therapy, malarial therapy has first rank, as it gives 70 to 96 per cent. cures in three to six weeks, and usually has a favorable effect on the complications of gonorrhea. In this form of treatment, six or seven malarial attacks are as effective as ten or twelve. Methods for fever therapy designed to imitate malarial therapy, such as maximum dose vaccine therapy of Mulzer and Keining, pyrifer and milk injections, have no great advantages that entitle them to replace malarial therapy.

—Concluded on page 425

VARIETIES OF *Venereal Disease* AND THEIR EFFECT ON GENERAL HEALTH

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STRICTLY speaking, the term venereal disease includes any disease which is acquired through venery or illicit intercourse. Common usage, however, limits the term to syphilis, gonorrhea and chancroid, irrespective of their mode of acquisition. In actual practice, all lesions on or near the genitals must be considered venereal unless proved otherwise. Six venereal diseases thus far have been definitely identified and there is a large borderline group which may or may not be acquired through venery.

For present purposes, we shall consider the major group syphilis, gonorrhea and chancroid, and the minor or less comcon group ulcedative and gangrenous balanitis (the fourth venereal disease), granuloma inguinale (the fifth) and lymphopathia venereum (the sixth). In the borderline group we include balanitis, venereal warts, phagedena, trichomonas, leukoplakia, scabies, pediculosis, and ulcerative or erosive lesions, all of which may be transmitted from one person to another through intercourse.

THE principal venereal diseases under consideration differ from each other in many respects. Syphilis is a constitutional disease from the very beginning; gonorrhea and chancroid, on the other hand, are local in their manifestations and if properly treated usually exert little or no effects on the general health. The incubation periods vary: in syphilis, about three weeks; in gonorrhea, from 4 to 7 days; in chancroid, from 2 to 5 days. All three diseases may coexist, and it is quite common to see a mixed infection of syphilis and chancroid acquired at the same exposure. What may appear to be an ordinary gonorrhea may also reveal a syphilitic chancre of the meatus two or three weeks after the appearance of the discharge.

Although the entire body is affected very soon after inoculation in syphilis, the first external manifestation is the chancre—a hard, somewhat elastic infiltration at the point of inoculation, usually on or near the genitals. Extragenital infection is not uncommon. Identification of the *Spirochaeta pallida* by means of the dark-field makes the diagnosis positive; otherwise the diagnosis remains indefinite until confirmatory evidence appears. Several weeks later, the serologic reaction of Wassermann and its modifications becomes positive. In women, the chancre may be invisible or it may assume the appearance of a slight erosion. Inguinal adenitis appears somewhat later; the glands are hard, round and painless and do not usually suppurate. Secondary manifestations involving the skin and mucous membranes next appear. These are followed still later by tertary lesions involving permanent degenerative changes which continue indefinitely.

GONORRHEA specifically attacks the mucous membrane of the urogenital tract, though any mucous membrane may be infected if brought in contact with the causative agent, the gonococcus. In the male, the urethra is primarily in-

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volved; in the female, the urethra, cervical os and the genital glandular structures. The diagnosis is made by identification of the gonococcus by means of the Gram stain. In 6 to 8 weeks, in an untreated case or a case with complications, a positive complement fixation reaction may be observed, but this is far less constant and dependable than the seroreaction of syphilis.

Gonorrhea is a self-limiting disease, in the sense that it runs a typical course in three stages; at first the inflammation increases in severity for several weeks; then it becomes stationary for a time and finally decreases in severity and remains as a deep-seated chronic infection. By contrast with syphilis, which requires from two to three years of almost continuous treatment, the average duration of a well-treated case of gonorrhea in the male is from 6 to 10 weeks; if improperly treated, there is no time limit. In the female, it requires 3 or 4 months of treatment, even without extensions or complications.

Chancroid, the third major disease, is the least damaging of the three. The lesion is a punched-out ulcer, which may be single or multiple and is easily autoinoculable. The etiologic factor is the streptobacillus of Ducrey. Chancroid is essentially a disease of uncleanliness. Suppuration of the inguinal glands (bubo) generally occurs. Syphilis and granuloma always should be suspected. There is some reason for believing that many, if not all so-called chancroids, are really syphilitic. In a study of 2722 so-called chancroids admitted to his service in the United States Navy in 1932, Commander Parsons found at least 2600 to be syphilitic by dark-field and serologic tests.

As to the effects of these diseases on the general health, limitation of time forbids more than the briefest review of the subject. Many cases of syphilis go unrecognized and untreated until the damage wrought is beyond repair. It is estimated that 60 to 80 per cent of syphilitic married women have been infected by their husbands, many of whom probably were infected venereally before marriage and considered themselves well. The danger of transmission is greatest in the first five years of the disease, if not adequately treated. Infection can and does take place through the seminal fluid.

THE sexes respond differently to syphilis and their health is differently affected. Active syphilis is more prevalent in men, whereas syphilis without symptoms or previous history appears to be more common in women. This probably is due to the fact that the initial lesion often is invisible in women. Women are more severely affected constitutionally, however, especially as regards the menstrual function, which often is seriously disturbed. It is interesting to note, in this connection, that the course of syphilis in women is favorably influenced by pregnancy and lactation.

Syphilis enjoys the dubious distinction of being transmissible to the fetus *in utero*, the infection passing from mother to child through the placenta. The syphilitic woman is extremely liable to spontaneous miscarriage; the frequency is said to be about 37 per cent and, with stillbirths included, nearly 60 per cent. The fetus may be born prematurely, macerated or intact; or it may be born alive either prematurely or at term with stigmata of heredosyphilis, or apparently normal. The mortality of the syphilitic child is very high. Children who survive their early years often show retarded evidences of prenatal or heredosyphilis in adolescence or early maturity. Non-syphilitic children born healthy have been infected by syphilitic wet-nurses.

In both sexes immediately following inoculation, the spirochetes proliferate rapidly and enter the blood stream, where they continue to reproduce and thereby reach the various organs and tissues. The effect of this invasion on the general health of the individual depends on the duration of the infection and the particular organs or tissues which have been most heavily attacked. The primary and secondary stages have comparatively little effect on the general health, though there may be many varied local manifestations. These stages are succeeded by a quiescent or latent stage in which occasional relapses may occur. The lesions become fewer but more localized and more or less destructive.

After this quiescent period, the destructive gummatous or tertiary stage

sets in, characterized by tumor-like masses in various organs—gummata with extensive destruction and sloughing of tissue. The final or degenerative stage is typified by various degenerative lesions, principally located in the cardiovascular and nervous systems and characterized by the replacement of parenchyma by fibrous tissue. Cardiovascular syphilis accounts for more than 33 per cent of fatalities. It is often unrecognized. The most common age incidence is between 35 and 55. It is believed that from 10 to 20 per cent of male syphilitics develop cardiovascular disease or neurosyphilis in later life. When these changes develop in the wall of a large blood vessel like the aorta, elastic tissue is replaced by fibrous tissue and the weakening of the wall thus produced leads to the formation of aneurysm and all its subsequent consequences. In smaller arteries, ruptures, thrombosis and ischemia result. Heart muscle is replaced by fibrous tissue and this leads to myocardial degeneration, arrhythmias and heart block. Any organ or tissue in the body may be thus seriously affected with correspondingly serious results to the general health, which need not be detailed.

NEUROSYPHILIS may appear in various forms—cerebrospinal syphilis, hemiplegia, arteriosclerosis, tabes and general paresis. About 5 per cent develop paresis, 3 per cent tabes, and 3 to 4 per cent cerebrospinal syphilis. Neurosyphilis is about three times as prevalent in men as in women. The most common effects of this condition on the general health are severe headaches, lightning pains and paresthesia, ataxia, disturbances of the bladder and sexual function, ptosis and diplopia, convulsions, paraplegia, character change, speech disorders, delusions and various neuroses. Gastric and visceral crises are common in tabes. In highly advanced conditions we encounter paraplegia, retention and incontinence of urine, uremic symptoms, advanced mental deterioration, alteriosclerotic changes and apoplexy. The destructive bone and skin lesions of syphilis need only be mentioned.

Gonorrhea being a local disease, its effects on the general health are determined in great measure by the manner in which the infection is controlled in the first week or two of the infection. In the male, the infection often spreads rapidly from the urethra, where it is easily curable, to the prostate, seminal vesicles, and frequently to the epididymes. The epididymis is attacked in 15 to 20 per cent of cases, but this can be prevented to a great degree by proper treatment. Prostatic and periurethral abscess may develop and require surgical intervention. The discharge is highly infectious; many eyes have been destroyed through the accidental transfer of Neisserian pus to the eye. When the acute symptoms subside, the infection settles down to a slow, chronic state and may remain latent in these organs for years, acting as a focal point for serious disturbances elsewhere in the body. With a low body resistance and an uncontrolled infection, gonococci may enter the bloodstream and are thus disseminated to remote organs and tissues. The joints and the iris are especially susceptible to attack, often with disastrous results. Less often the infection may be carried in this way to the tendon sheaths, muscles, bursae, meninges, periosteum, parotid, endocardium and pericardium. Hepatic impairment with jaundice is frequently observed. These complications exert a most deleterious effect on the general health and occasionally may induce a fatal result.

GONORRHEA of the joints is a crippling condition characterized by the development of adhesions, infiltrations and ankylosis. Exostosis of the os calcis induces disability because of pain and difficulty in walking. Inflammation of the seminal vesicles may be mistaken for appendicitis and the error discovered only on the operating table. Urethral stricture is a common sequel, in the male, and may, in extreme cases, constitute an actual obstruction to the urinary flow, which may lead to uremia and death. Postgonorrheal neurosis, based on a chronic prostatovesicular focus with inflammatory changes in the verumontanum and the deep urethra, is associated with frequent seminal emissions, premature ejaculation and other forms of sexual impotence and referred pains in various parts of the body—the so-called

sexual neurasthenia. In the more severe cases, the individual may be more or less incapacitated for economic effort; constant prostatic irritation may lead to perverse practices, first for relief, later for habitual gratification, and may bring about such a degree of mental aberration as to account for some of the atrocious sex crimes with which we are familiar.

Persistence of pus in the infected prostate and vesicles may injure and kill sperms, resulting in male sterility; the same result is brought about in a different way when bilateral epididymitis occurs as a complication and blocks off the exit of sperms from the testicles. Semen infected with the gonococcus often is responsible for the infection of the female partner, even though there are no clinical symptoms of the disease.

IN the female, gonorrhea also leaves its tragic trail, a trail even more tragic than in the male. In childhood, vulvovaginitis is quite common. Though not specifically venereal, the disease undoubtedly derives from some individual who was venereally infected. These children may remain gonococcus carriers for long periods and may possibly spread infection when they enter the active sexual life, without knowledge or remembrance of their childhood infection. It is also conceivable that the infection may culminate in a condition of the internal genitals which may lead to sterility in adult life without adequate explanation of its causation. In the adult woman, gonorrhea involves the urethra with the possible development of chronic urethrotrigonitis and the later development of stricture; the cervix and tubes and Bartholin's glands are often involved with serious sequelae. It is usually extremely difficult to identify the gonococcus in women. Suffice it to say that 40 per cent of the sterility in women and 50 per cent of gynecologic operations are said to be due to gonorrhea. Women become chronic invalids and they are often totally unsexed surgically as a life-saving measure. Childbirth often lights up a latent gonorrhea and the lochial discharge offers a favorable medium for the growth of the gonococcus. Infection of the child's eyes may result in complete loss of sight unless prophylactic measures are adopted. The focal infections of distant tissues and organs already mentioned, especially arthritis, are similar to those which occur in the male.

Pregnancy supervening on a preexisting gonorrhea constitutes a dangerous situation for both mother and child. The tissue congestion of the pregnant state offers a strong stimulus for the proliferation of gonococci which may induce an exacerbation of the latent infection. In consequence, there may be an upward extension involving the uterus and even the tubes. Ruptured pyosalpinx in a pregnant woman infected with gonorrhea has been reported. The tendency of the gonococci to remain latent for long periods without losing their infectivity is especially strong in women. As carriers they are often capable of transmitting infection without presenting symptoms or evidences of disease under the most exacting investigations. In women and female children, because of anatomic formation, gonorrhea of the rectum is quite common and usually not recognized. Various authors have observed this complication in 25 to 75 per cent of Neisserian infections. The rate of incidence in female children is even higher. Stricture of the rectum may follow the original infection with serious disturbances of the gastrointestinal functions.

THE effects of chancroid on the general health are generally limited, but may be of a serious nature. A long, tight foreskin with its concomitant chronic uncleanliness not only favors infection with the Ducrey bacillus but excites an inflammatory balanoposthitis of more or less severity. The chancroidal secretions may burrow their way through the penis into the urethra; abscess, erysipelas or gangrene may supervene. The frenum often is destroyed. In about 50 per cent of case the singuinal glands are involved and may culmniate in suppuration. Fistulas may extend to the deeper glands and may resist all treatment for months. Infrequently the lesion becomes phagedenic and treatment seems to be utterly unable to stop the progressive destruction of tissue. The process eventually ceases after much tissue damage has occurred.

ULCERATIVE and gangrenous balanitis is the so-called fourth venereal disease. In the male, the causative factors are a phimotic foreskin which excludes the air, together with a symbiosis of anaerobic fusiform bacilli and the spirochetes of Vincent. It is fostered by uncleanliness. The disease cannot occur in the circumcised. It is particularly prone to attack lymphoid tissues and follows lymphatic channels. The entire sulcus may be eroded and ulcerated and there is an offensive, contagious discharge. Occasionally the involvement assumes a fulminating gangrenous character, the deep tissues are attacked and the entire glans may be destroyed in a short time. This development is associated with marked constitutional symptoms. In the phagedenic type, extensive tissue destruction occurs which may extend to the abdomen and thighs. In the female, the condition is not often observed and usually is of mild character, possibly owing to the fact that the lesion is hidden and also because the vaginal secretions may exercise a protective effect on the genital tissues.

THE fifth venereal disease, granuloma inguinale or venereum, is occasionally seen in our climate, but is endemic in the South, especially among Negroes. Both sexes are affected, females more seriously than males. The incubation period varies from a few days to several months. The Donovan bodies are generally accepted as being the specific organism, involved and are considered pathognomonic of the disease. The lesion appears first as a papule on the genitals or in the groin, which ruptures and refuses to heal. It spreads superficially, slowly but extensively, and may heal in one spot and spread in another simultaneously. It is extremely chronic and may last from 3 months to 9 or 10 years. There is a blocking of the lymph flow which results in lymph stasis and the development of a pseudo-elephantiasis of the external genitals. There are no constitutional symptoms of importance and the disease responds to intravenous injections of tartar emetic or fuadin. In the female, the lesion usually begins in the fourchette and gradually destroys the vagina, perineum and urethra. Death may occur from infection and progressive anemia.

LYMPHOPATHIA venereum, the sixth venereal disease, is also known as lymphogranuloma inguinale, poradenitis and climatic bubo. It is often confused with the fifth disease because of the similarity of names. It is contracted venereally and is quite common in warm climates. Many cases have been observed in this country in the past few years. It is caused by an ultramicroscopic filtrable virus which can be transferred to certain experimental animals. In the male, it begins with a small herpetiform or erosive lesion on the external genitals, which is followed in a week or two by the development of a characteristic subacute or chronic reaction in the regional lymphatic glands and adjacent connective tissues, with the production of small foci of suppuration. The inflamed glands coalesce and may reach or exceed the size of the closed fist. Suppuration often is followed by the production of multiple fistulas from which a yellowish purulent discharge exudes. Marked constitutional symptoms characterize this disease, notably lassitude, prostration, fever and sweats, loss of appetite and weight, in addition to erythema nodosum and diffuse swellings about the joints. The adenopathy is localized in the inguinal and adjacent glands. Genital elephantiasis is common and often follows surgical excision of the glands. Meningeal irritation due to dissemination of the virus has been observed. In a recently reported case, epileptiform convulsions were followed by coma and death from meningoencephalitis. In the female, the course of the disease is somewhat different. The primary lesion is generally situated on or near the cervix and but rarely externally. The inguinal glands, therefore, are not usually involved, as in the male. Instead, the infection extends to the deep pelvic lymphatics and the perirectal lymphatic tissues. The process may extend to the clitoris and labia or about the vulva and deeply to the sides of the rectum. Stricture of the rectum and elephantiasis are not uncommon later sequelae. The associated conditions involving the various forms of this disease have been termed esthiomene or the genito-anorectal syndrome. The definite

diagnosis is made by the Frei test, which becomes positive in the acute stage and remains positive for many years. In granuloma inguinale, on the other hand, the Frei test is persistently negative. When healing finally takes place, after months or years, it leaves a considerable amount of fibrosis and scarring.

THE borderline group have been mentioned and require no further comment. Their effects on the general health are usually transient and indirectly injurious to health. It should be remembered, however, that one of these conditions, *Trichomonas vaginalis*, may be transmitted venereally. The specific organism has been observed in prostatic secretion. The disease may spread to several members of a family, especially to female children. It may be mistaken for gonorrhea because of the similarity of symptoms. The vaginal discharge is accompanied by an offensive odor and cervical erosions may be observed.

In conclusion, it is evident, despite this hasty review, that the venereal diseases make quite a formidable list and present a large variety of effects on the general health. Most important is syphilis, because of the destructive damage it causes to essential organic structures; gonorrhea stands next in importance because of its organic and functional disturbances. The irony of the existing situation lies in the fact that the venereal diseases are largely preventable. If we suffer from their effects today it is because we failed to adopt effective prophylactic and curative measures in the past. Their widespread occurrence can be diminished. It must be done, if we would preserve future generations from their disastrous effects.

114 EAST 61ST STREET.

PHENOBARBITAL CONTRAINDICATED IN PARKINSONISM

EUGENE ZISKIND and ESTHER SOMERFELD ZISKIND, Los Angeles (*Journal A. M. A.*, July 3, 1937), state that by error in December 1935 a patient suffering with chornic encephalitic parkinsonism was given phenobarbital 1½ grains (0.1 Gm.) three times a day instead of his usual scopolamine hydrobromide therapy. Within four days he became bedridden with rigidity so marked that the body could be moved as if made of one block. This extreme rigidity disappeared very rapidly when the phenobarbital was discontinued, the condition returning to its previous state. Recently they saw another patient with the same illness who, as a result of phenobarbital therapy, had a marked aggravation of her rigidty, which receded on removal of the drug. In addition, they have administered this drug in three other cases of parkinsonism for the purpose of observing the effect on rigidity. Their reports demonstrate the inadvisability of using phenobarbital in patients with Parkinson's disease. If phenobarbital has a specific effect on the mechanism of plastic rigidity and not on the other types of rigidity, there may be a diagnostic aid for isolating the early Parkinson cases. Likewise, from a therapeutic standpoint the question arises as to whether or not physiologic antidotes for the barbiturates may not have a salutary influence in the treatment of this type of rigidity. Studies with regard to these factors are now in progress.

THE PROBLEM OF TUBERCULOSIS

B. P. POTTER, Secaucus, N. J. (*Journal A. M. A.*, May 8, 1937), attempts to outline a workable program in which all physicians can and should partake and that embraces methods by which it may be hoped in the next several generations not only to reduce the morbidity very appreciably from its present level but also to give the profession just reason to feel that such reduction might be directly linked with its efforts. Between the ages of 15 and 35 tuberculosis accounts for more deaths in the general population than does any other disease, and at least 500,000, if not more, individuals are known to have clinical tuberculosis. This is the real problem. There are an ever present large number of carriers who serve to plant the seeds for a new generation of tuberculosis individuals.

THE LAUGHLEN AGGLUTINATION TEST FOR THE SEROLOGICAL DIAGNOSIS OF *Syphilis*

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IN 1935, Dr. G. F. Laughlen of Toronto introduced a rapid and accurate test for the diagnosis of syphilis. Through his courtesy it has been my privilege to try this test on a number of occasions during the year of 1936, with the reagent furnished first by Dr. Laughlen, and later through the courtesy of the Lederle Laboratories.

There are, of course, already a number of rapid tests for the diagnosis of syphilis which have proven satisfactory in the hands of certain operators. Most of these tests have maintained a reasonable degree of accuracy, but have either required an outlay of elaborate equipment, or else have required considerable experience and training to carry out the test. With the Kahn precipitation test, which has been one of the most favorably received of the precipitation tests, the reading requires the eye of an experienced technician.

The Laughlen test is the essence of simplicity in technique; positive readings may be made in two minutes in strong reactions; and negative reactions may be given in ten minutes. The TIME element is the chief factor in estimating the positiveness of the test. The reading is simple and clearly visible with the naked eye, requiring no special training for ability to read. Accuracy has not been sacrificed and the test, when properly interpreted, seems to equal—if not surpass — the standard Wassermann. Since it utilizes a reagent similar to the Kahn, it equals the Kahn in sensitivity. Dr. Laughlen cited, in a series of four hundred cases, a 98 per cent agreement with the Wassermann, and 99 per cent agreement with the Kahn.

IN this series of cases it was primarily the aim to test the reagent with the sera of known partially treated cases of syphilis, and compare the results with the Kolmer-Wassermann complement fixation test and the Kahn precipitation test. It seemed that the most severe trial which could be applied would be to try the test with the sera of previously known positive cases—where it was doubtful whether treatment had been complete. Such a trial would permit greater latitude for disagreement, with the positive past history known. Therefore, in this series, there will be 99 cases of previously known positive bloods which have had at least one course of treatment; 99 cases in which the history of syphilis was absent (many of them blood donors), and in which no known treatment had ever been received, and in which both Wassermann and Kahn were negative; a series of 43 cases in which there was a recent positive history of syphilis without treatment; and 16 cases in which nothing in the past history was known.

A table has been prepared. In the 99 cases with negative history, with both negative Wassermann and negative Kahn, the Laughlen test was found to agree entirely. All were negative. In the table, four figures are used for each case. The first two figures on the left represent the reading of the cholesterolized and plain alcoholic antigens of the Wassermann (C and A), respectively. The third figure is the reading of the Kahn (K), and the fourth is the reading of the Laughlen (L). Thus, the 4444 means that all four tests read four plus, and 4433 signifies that the cholesterolized and

alcoholic antigens of the Wassermann read four plus; the Kahn, three plus; and the Laughlen, three plus. "AN" signifies an anticomplementary Wassermann reaction.

Negative history, negative Wassermann & Kahn	99	(Laughlen agreed
Treated cases with positive history	99	throughout)
New cases with positive history and untreated	43	
History unknown, positive or doubtful reaction	16	
Total	257	cases

99 Treated Cases

CAKL	CAKL	CAKL	CAKL	CAKL	
4444	3243	2232	1023	0013	
4433	4300	2212	1021	0012	
4432	3012	2132	1013	0012	
4422	3022	2132	1013	0012	
4412	3023	AN32	1012	0012	
4403	3032	AN32	1012	0011	
4402	3033	2123	1011	0011	
4401	3033	2112	1011	0011	
4323	2222	2111	1010	0002	
4244	2222	2110	0032	0001	
4244	AN22	2044	0023	0001	
3333	AN23	2022	0033	0001	
3212	AN23	2000	0023	AN01*	
3213	2233	1111	0023	0000	—TWENTY CASES
3233	2233	1101	0022	AN00	
3233	2233	1034	0021	AN00	

* New born. Treated Mother.

43 New Cases With Positive History

CAKL	CAKL	CAKL	CAKL	CAKL
4444*	4244	2044**		
AN44	4233	1034**		
AN44	3344	0044**		
4443	3344	0000**		
4443	3344	0033***		
4434	3344	AN03**		
4433	3332			
4344	3142			
4244	3200**			

* Twenty cases were 4444.
** These had positive Dark-Fields.
*** Newborn, untreated Mother.

16 Cases—History Unknown

CAKL	CAKL	CAKL	CAKL	CAKL
4443*	AN33	1122	0002	
4402	2223	1111	0002	
4401	2201	1000	0002	
3301	2032	0011	0001	

* Proven case of leprosy.

For explanation of table see previous paragraph.

TO those who have not been accustomed to interpreting, or making a comparison of, the various tests for syphilis there may seem to be a wide discrepancy and marked disagreement. On analysis, however, this is not the case. It is generally known, and agreed, that the curve of the Wassermann test, under treatment, and the curve of the Kahn under treatment, show marked variations. The Wassermann, in many cases, will recede rapidly under treatment from a four plus to a negative, only to return to four plus if the treatment is not carried to completion. All are familiar with the periodic check on the Wassermann test after it has once become negative. The Kahn, on the other hand, which the Laughlen closely follows, does not pursue the undulating curve of the Wassermann under treatment; but generally produces a curve corresponding to a gradual descent —in the fashion of a straight line—from four plus to negative. Thus it is common that we find a negative Wassermann, and a two plus Kahn. Seldom, except in the so-called Wassermann-fast cases, or occasionally in the very new cases, is there found a four plus Wassermann and a negative Kahn. As a general rule, with exceptions, the Kahn and Laughlen both have a tendency to become positive a few days earlier than the Wassermann, and, also, have a tendency to remain positive in a low degree for a longer period under treatment. Therefore, as a whole, both the Kahn and Laughlen tests seem to have a superiority over the Wassermann in picking up a treated case of syphilis. Since I am not primarily interested in stressing the superiority of the Kahn and Laughlen test, over the Wassermann test, for the purpose of supplanting the Wassermann, further discussion along that line will be omitted.

The chief value of both the Kahn and the Laughlen lie in their speed, combined with accuracy. The Kahn is difficult to read, and at best requires an hour for setting up the test at an unexpected moment. The Laughlen, on the other hand, may be set up and read within a few minutes. For that reason, the Laughlen test is of most importance to us because it forms a rapid means of testing blood donors. No donor need go to the operating room, even in emergency cases, without having had his blood tested for the absence of syphilis. The test should prove equally valuable in small hospitals, and is adaptable for use in the laboratory of the private physician.

The test is economical, requiring a minimum of equipment and reagent.

It is an accurate test.

The reagent may be kept at room temperature.

The reagent is available at a moment's notice.

Sterility is not an important feature.

The test requires no special training in technique.

The test requires no special training for reading.

It is rapid.

The reagent is stable.

The Reagent

THE reagent is made in the same way as the precipitation reagent or antigen that is used in the Kahn test. The technique of preparing the Kahn antigen may be found outlined in most textbooks on laboratory methods. The exact technique of preparing the reagent according to Laughlen will be found in the reference at the end of this article.

The Kahn reagent is cholesterolized by the addition of 6 mg. of pure cholesterin to each c.c. of antigen. The cholesterin, supplemented by balsam, produces greater speed and sensitivity by coarsening the particles in the antigen suspension without impairing the specificity.

Modification is carried out by the addition of some fat stain, such as scharlach R, to the point of saturation. This colors the suspended particles of the antigen, but not the liquid in which the particles are suspended, thus adding to the visibility of the reading. A small amount of compound tincture of benzoin is added. The modified reagent is then diluted with 1.5 per cent saline. More stable or more dense emulsions are obtained by the addition of more cholesterol or more balsam. Then the reagent must be adjusted for sensitivity by the addition of the proper amount of 10 per cent saline, which must be determined by test. The 10 per cent saline acts as an electrolyte and increases the activity of the reagent. This process, of increasing the activity, however, has its limitations. The addition

of too much electrolyte causes the reagent to become non-specific. The physical character of a diluted antigen, more than the antigen itself, determines the specificity. Therefore, an amount must be added which will render the reagent so that it will not show agglutination when mixed with an equal part of known negative serum, for a period of ten minutes or longer. Further checking against weakly positive and strongly positive sera must be carried out.

BECAUSE of the difficulty and time consumed in arriving at the proper amount of concentrated saline required to set up the proper activity, Dr. Laughlen has suggested that the agglutination reagent be secured ready for use from a central laboratory where it can be made in quantities. Small quantities are as difficult to prepare as larger amounts, and the preparation of small quantities would greatly add to the trouble and expense. The reagent is sent out, ready to be activated by the addition of the concentrated saline, with the required amount, previously estimated, noted on the ampoule. The reagent, as sent out, may be kept at room temperature; and preferably in the dark. It will remain in good condition for about six to twelve weeks. In the activated stage the reagent is good for about eight to ten days. While it would be necessary to prepare an activated reagent every week, it would only be necessary to procure reagent from the central bureau about once every six to twelve weeks. The reagent in time becomes too active, so that if kept too long all sera may eventually react positively. Therefore, with each series of tests a negative and positive control should be run. That is a requirement which all the serological tests used in the diagnosis of syphilis must meet.

"The reagent is really an emulsion (water, alcohol, and balsam) in which are suspended particles derived from the beef heart, particles of stain, and cholesterol. There are, also, salts in true or molecular solution. The particles of meat, stain, cholesterol, and balsam cohere. These coherent particles tend to agglutinate in the presence of an electrolyte, but the colloidal nature of the solution prevents such an action. In other words, in molecular solutions these particles would agglutinate, and in colloidal solutions they would not agglutinate. In the reagent, which is both molecular and colloid, sufficient denseness of the colloidal suspension is obtained to prevent agglutination unless other reagents are added. When non-syphilitic serum is added to the reagent, there is a lessened tendency to agglutination, but when syphilitic serum is added the union of antibody-like substance with the coherent particles gives rise to agglutination which is prompt and definite."

Equipment for Test:

Reagent, activated by concentrated saline.

Plain glass slides.

Large platinum loop (quarter inch diameter).

Bunsen burner and flame.

Known positive and known negative sera for use as controls.

Watch or clock.

Technique of Test

THE technique is very similar to that used in blood typing. The platinum wire loop is passed through the flame, not for the purpose of sterility, but chiefly to avoid contamination of the reagent with the various sera that may be tested.

Place two large loopfuls of activated reagent on a glass slide, close together. Place two loopfuls, i.e., an equal amount, of serum nearby and then mix the four drops thoroughly. Rock the slide from time to time. That is all there is to the technique.

Read the test without the microscope, holding the slide against a dark background such as the laboratory table or a dark corner in the room.

Reading

THE reading is made on the basis of the period of time that it takes for agglutination to take place. The shorter the period required for agglutination, the more positive the test. Readings are best made with the naked eye, although they can be made through the microscope. There is a general tendency, however, when read through the microscope, to gauge the degree of positiveness by the

size of the clumps. This leads to erroneous readings. *The degree of positiveness is determined by the shortness of time that it takes to produce macroscopic clumping, or agglutination.*

A negative test is indicated by no change at the end of ten minutes in the pinkish white turbid mixture of serum and reagent. As drying is about complete there may be a slight change, as seen through the microscope, at the margins, but this is of no significance. Unless the change is general, and macroscopic, it must not be considered. If drying is too rapid, i.e., occurs before ten minutes, the test must be repeated.

In the positive control specimen, and other strongly positive specimens, coarse particles soon develop, and these particles increase in size in the agitated mixture of the previously opaque serum and reagent. The action is recognized by the naked eye, and in most cases shows a marked tendency toward agglutination at the end of one minute, and complete agglutination before the expiration of two minutes, especially in strongly positive reactions.

FOR this series of cases, those showing no agglutination in ten minutes were called negative; those requiring eight minutes to show agglutination, as one plus; those requiring six minutes, two plus; those requiring four minutes, as three plus; and those requiring two minutes or less, as four plus.

The test should never be read without the use of a known negative control.

A few of the advantages, not previously mentioned, include:

Inactivation of serum is not necessary.

The test is equally applicable to spinal fluids.

Whole blood and hemolyzed blood may be used, although not as satisfactory as serum or plasma.

Dried blood serum may be used.

The slides of the test may be preserved, after drying, as a permanent record.

While the technique is rapid, and certainly could not be made easier, it is exacting. Thorough mixing, and shaking, must be done. The stained particles add materially to the ease of reading. The amount of material required, and used, is surprisingly small. The reagent is stable and may be ready for emergencies, if prepared every week. Accuracy has not been sacrificed to secure simplicity, and the reading of the degree of positivity is merely a matter of estimating the time required for agglutination.

Chemical reagents, such as acetic acid and a variety of others, will interfere with the test. Contamination with foreign chemicals—on the slides or in the tubes containing the Laughlen reagent—is to be avoided. Dr. Laughlen has said that an excess of bile in the serum, or badly preserved specimens, may offer difficulties on some occasions. However, the degree of interference will by no means be as great as that with the Wassermann.

I wish to acknowledge the assistance of my technician, Katharine Smith Howey, and the other members of my staff for their cooperation.

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HYPOGLYCEMIC THERAPY

H. MASON SMITH, Tampa, Fla. (*Journal A. M. A.*, June 5, 1937), asserts that treatment by hypoglycemic shock in dementia praecox can be carried out successfully in any general hospital that has a good psychopathic ward with a trained personnel of physicians and nurses. Indeed the dangers are more readily avoided and the emergencies more easily met in such an institution than in a psychopathic hospital.

THE PRESENT STATUS OF THE TREATMENT of Schizophrenia

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IN the past, various more or less symptomatic treatments have been the only methods at hand for the treatment of schizophrenia or dementia praecox. These methods consisted of psychotherapy, sedative drugs, narcotics, occupational therapy and various endocrine products. Within the past year there has been, especially in this country, a tremendous interest and enthusiasm since newer and apparently more beneficial methods have been discovered. While these methods at present are relatively untried and the manner of approach and the results are still uncertain, they, nevertheless, give promise of much greater benefit than anything that has been used before. The fact that these drugs produce organic symptoms brings the various psychobiological theories of Freud and Jung closer to the organic theories of Kempf, Adler and Kretschmer. Our past theories are now again in a state of metamorphosis. There is present doubt as to the truth of our philosophic approach and a tendency to a more concrete organic investigation to determine the cause of this disease.

Amongst the two most prominent treatments today are:

1. Metrazol (frequently with camphor)
2. Hypoglycemic treatment

The first method, namely, the treatment with metrazol, has not been used to the same extent in this country as that with insulin. Most reports of it are found in the foreign literature, especially the German and Hungarian. The idea of the treatment of schizophrenia by inducing convulsive states followed the work of Nyiro, Jablonszky, G. Muller, Meduna, A. Glouse and many others. They postulated that epilepsy and schizophrenic states are antagonistic. In their own words, "Between epilepsy and schizophrenia there is a biological antagonism. Should it be possible to induce epileptic attacks, it would change the humoral, chemical, hematological and other aspects of the organism in such a manner that thereby—since the organism, so changed, would express an unfavorable basis for the development of schizophrenia—a biological possibility would arise for the remission of the disease." At first various tetanus-like substances were used to induce epileptiform attacks, such as strychnine, brucine, thebaine, and camphor. Meduna reported considerable success by using 5 to 10 ccs. of 10 per cent solution of metrazol intravenously. This produced a tonic convulsion followed by a clonic one. Later the patients were confused, dizzy and fell into a deep sleep lasting from five to ten minutes. They then frequently woke up exhausted and quickly fell asleep again for five or six hours. A single daily attack was produced, the series varying from two to thirty days. Occasionally it was necessary to increase the dosage. Of 110 unselected cases treated so far, without regard to type, 54 showed remissions and 56 no change. The conclusion is expressed by these workers that cases coming for treatment at six months after the first symptoms of this disease could be offered 80 to 90 per cent probability of remissions. However, in the older cases the efficacy of the results decreases rapidly with the duration of the disease. E. Friedman in Buffalo, New York, reported 25 cases with a 50 per cent success.

The commonest drugs that have been used to produce convulsions are:

I-Camphor 25 per cent in an oily solution intramuscularly

II-Metrazol (cardiazol) 10 percent aqueous solution intravenously

In using these drugs it is necessary previously to render the urine alkaline by giving two teaspoonfuls of sodium bicarbonate three times a day and to continue this throughout the treatment. Fluids are also limited to two litres a day.

A freshly prepared camphor solution is injected intramuscularly twice a day beginning with 16.0 cc. and increased daily by 4.0 cc. until the convulsive dose is determined. A rest period of a day then follows after which the convulsive dose is given daily for 20-30 days. Convulsions occur within 15 minutes to three hours after injection with one to six convulsions usually occurring. The maximum dose of the camphor mixture is set at 56.0 cc.

In using metrazol therapy 5.0 cc. are given every other day with an increase of 1.0 cc. for each injection until the convulsive dose is reached, following which this dose is given for 20-30 doses. The maximum dose is set at 16.0 cc. With metrazol, unlike camphor, a single severe convulsion occurs almost instantly. No sedatives are given to control the convulsions, but otherwise the treatment is similar to that of any convulsion. Meduna reports that the cases which respond earliest to the production of convulsions showed the most marked and stable improvement, other factors being equal.

Usually camphor is given as previously outlined until the convulsive dose is reached, after which cardiazol (metrazol) therapy is begun in the usual manner. It appears as if camphor sensitizes the body so that smaller doses of cardiazol are necessary.

Some patients object to this form of therapy because of the unpleasant prodromal symptoms or aura produced. These comprise chiefly various types of paresthesias, such as intense prickling or burning of the skin, a stifling sensation in the chest, nausea, vomiting, dizziness and confusion.

Meduna lists very few contraindications to this form of treatment. These comprise chiefly obvious disorders such as a failing heart, febrile disease, blood diseases, chiefly anemia, and kidney diseases. Others mentioned are menstruation and a history of cranial trauma associated with a period of unconsciousness.

It is felt that twenty to thirty doses of either drug should be given regardless of the apparent clinical improvement that the patient may show after shorter therapy, as otherwise relapse is more common. However, relapses can again be treated with benefit in the same fashion and show a more stable improvement.

This method is relatively safe and very simple. No deaths have been reported by Meduna in over two thousand cases that have received this form of therapy. It appears at least as efficacious as the hypoglycemic method of Sakel and less intricate and dangerous. There is hope that it may some day lead to a discovery of the true drug or agent responsible for the improvement and no doubt to a better understanding of the mechanisms involved.

Hypoglycemic Method:

THE early work of the hypoglycemic treatment was first introduced in its present form by Manfred Sakel and Karl T. Dussik of the University of Vienna. They had been working with a great deal of vigor in this field since 1933. However, some mention of this form of treatment appeared in literature as early as 1928. Various attempts have been made to express on rational grounds the results obtained. Sakel has pointed out that the results apparently depend upon the production of hypoglycemic states, the proper management of each shock, and the psychological considerations given throughout the treatment. He believes that "The hypoglycemic state weakens and finally represses that portion of the mind which appears to be most active at the time so that hitherto latent, subdued and repressed elements are again brought to the surface so that they can again prevail over those which are now repressed. This is particularly clear when a hypoglycemia reaches its greatest intensity just before the onset of coma. In cases which follow a favorable course the repeated hypoglycemic states finally eliminate the psychoses so that the normal personality can again achieve dominance." The members of the psycho-

analytical school have attempted to express the results of treatment by purely psychobiological methods, stating that the death threat "by withdrawal of glycogen forces a definite withdrawal of libido from the aggressive, hostile or other negativistic behavior patterns." In other words, as expressed by Jelliffe, "There is a withdrawal of libido from the outside world and its fusion with the death impulse for the maintenance of the narcissistic ego." Guirard and Nodet have offered three explanatory theories:

1. There is a release of the vagatonic blocking of nerve cells with a repression of the old pathway in the nervous system allowing the most recent to take dominance with reestablishment of the hierarchy of their responses.

2. By continued shocks of the nerve cells produced by insulin which reach almost a point of annihilation. As soon as the cell is rehabilitated, the physiological processes begin to dominate and become polarized much more readily in a normal direction.

3. Insulin detoxifies the entire organism and improves metabolism. As the authors state, they propose these theories in the same manner as Sakel did, namely, to criticize and then abandon them should better ones arise.

VARIOUS words of caution have been issued by numerous workers who show that insulin shock may cause irreversible changes in the central nervous system. In a paper by Moersh and Kerlhn at the recent meeting of the American Medical Association it was mentioned that there is a very great danger of such irreversible changes if the coma is prolonged beyond a reasonable length of time. In their opinion three to five hours was the absolute maximum.

The original treatment was divided into four phases. In the first, or preparatory phase, insulin was given one to three times daily in fifteen to thirty unit doses during the fasting state. No carbohydrates are given for four hours. The dose is increased every second to third day according to the reaction of the patient, insulin being given only once a day until the second or shock phase is reached. In this phase a daily dose is given each morning consisting of the same amount as that which produced the first shock. The patients show a great deal of variation in this regard and the dosage may vary from 20 to 260 units daily. Shock may occur within three-quarters of an hour to five hours after the injection. Following this the phase may be terminated by giving glucose by stomach tube or intravenously. Should convulsions occur the treatment is interrupted in the same fashion. The number of shocks given depends upon the judgment of the operator. Sakel, himself, states that even he does not know definitely when to terminate the hypoglycemia since he admits that he varies it even with the same case. Occasionally it is necessary to give sixty to seventy shocks before a favorable response is obtained, although most patients average about thirty. In the third phase, or rest pause, insulin is omitted one day a week. While in the polarization or terminal phase the insulin may be decreased and carbohydrates may be given shortly after the injection of the insulin. As the treatment continues the clear phases produced by the hypoglycemia become lengthened until finally they continue beyond the period of hypoglycemia and the patient may remain clear or free from hallucinations or delusions for a long time, or this improved state may continue until the next morning of their treatment. In this period they frequently show good insight. At this point there is a curious polarization or reversal of reaction present. The patients who had been clear at the beginning of the treatment only during the hypoglycemia, and who became psychotic again at the cessation of the hypoglycemia, now become completely symptom-free during the day but, paradoxically, show psychotic symptoms for a time during the initial period of the hypoglycemia. Various modifications have been made by workers throughout this country so that no definite stages are at present recognized. At the present time intensive work is being carried on in this country to prove or disprove the startling results of European workers with the hypoglycemia treatment of schizophrenia. Dr. Manfred Sakel, at the invitation of the Commissioner of Mental Hygiene of the State of New York, Dr. Frederick W. Parsons, consented to give a course in his method to physicians in various State Hospitals who gathered together

at the Harlem Valley State Hospital for this course. The New York Department of Mental Hygiene has been very active in this field and is at the present time treating selected cases of dementia praecox in all the State Hospitals. The results in these cases will be given later in the paper.

SAKEL points out the difficulty of evaluating the final results of treatment and in demonstrating them in statistical tables because of the natural fluctuation in this disease and the absence of the definite symptoms that are present in physical diseases, together with the impossibility of making a certain prognosis in any given case. In estimating the results of treatment, recent cases of six months or less duration are distinguished from the chronic cases—those of one and one-half years duration. The results are interpreted as remissions. "A full remission indicates that the patient is not only symptom-free after the conclusion of treatment but that he has full insight into his illness, that his emotional reactions are normal and that he can return to his former work. In good remissions the patient is free of schizophrenic symptoms and can resume his former work with only some slight defect." Sakel also mentions social remissions. He quote various figures of natural remissions varying between five and 20 per cent and in some cases 30 per cent. However, his figures show 88 per cent of treated cases with good or full remissions in patients who returned to work. In these 70 per cent were full remissions. Of his early cases 88 per cent gained definite and 70.7 per cent full remissions, while in his chronic cases 47.8 per cent gained good and 19.6 per cent full remissions. In his new cases, three cases of full remissions, five of good remission and one of social remission have been followed by recurrences after the lapse of a year, making approximately 9 per cent of recurrences. When these cases were again submitted for treatment most of them showed good improvement. He points out that it has been demonstrated by others that the benefits of this treatment decrease rapidly when the psychosis has been of longer than six month duration. In England Margaret Wilson believes that the treatment is promising and advises introduction into England. Joseph Wortis, who has been one of the most active proponents of the treatment in this country, has demonstrated in his cases that 70 per cent of the patients have benefited while the remainder have been unresponsive. The good results in European countries appear to far exceed those of this country. It is felt that this may possibly be due to differences in the criteria of dementia praecox and the European conception of Bleuler's schizophrenia. So far 275 patients have concluded their treatment in the New York State Hospitals, while approximately a similar number are still under treatment. The results of the treatment so far have been as follows:

Cases Paroled—Recovered: 66 or 24.4 per cent
Much Improved: 49 or 17.8 per cent
Improved: 21 or 7.6 per cent

IT IS thus evident that approximately 50 per cent of the cases improved sufficiently well enough to be paroled home. It must be realized that in the majority of cases in State Hospitals the most promising, namely, the most recent cases, were given the initial treatment

The following table of Wilson shows the experience of some of these workers:

PLACE	WORKERS	NO. OF CASES	RESULTS
Vienna	Sakel and Dussik	104	New: 86.2 per cent remission; full, good or fit for work Old: 45.7 per cent remission; full, good, fit for work
Switzerland	Müller and others	70	35 full remissions, 19 improved, 16 uninfluenced
Lugoi	Lichter	9	All negative
Giessen	Ederle	15	Quick remission (new); some favorably influenced (old)
Zagreb	?	20	5 discharged
Kiejo, Japan	Kubo	17	Good
Vilna, Poland	Rose	19	Good
Antwerp	Anderson	few	Favorable

by this method. At the Rochester State Hospital treatment has been administered by two physicians of the Medical Staff, Drs. Hunt and Feldman, with approximately the same results as elsewhere. The results will probably be reported by them at a later date. The results of treatment in this country have to be contrasted with those of European countries. It will be seen that, with few exceptions, reports in Europe are much more optimistic than in America. Most of the foremost workers, such as Hoff, Engerth, Stransky, Stern and Weiss, as well as Pötzls (in whose clinic Sakel developed the treatment), are very much impressed by this theory. Wagner-Jauregg was one of the few men of note who stated he had not been convinced of its value but would withhold comment until further research into its merit had been pursued.

Max Müller of Switzerland reported the following results:

	DURATION OF ILLNESS UP TO SIX MONTHS	DURATION SIX TO EIGHTEEN MONTHS	DURATION UP TO EIGHTEEN MONTHS	DURATION OVER EIGHTEEN MONTHS	TOTAL
Full remission	40	14	54	2	56
Improvement	5	8	13	16	29
Not influenced	7	4	11	22	33
Total	52	26	78	40	118

One fatality.

IN ESTIMATING the results of treatment enthusiasm for a new and apparently efficacious method has apparently biased the judgment of some observers to make much more favorable prognoses than might otherwise have occurred. This can be seen in the reports submitted by different workers. Some report a large number of "complete cures or remissions" while others have more cautiously tabulated case results under the heading of "much improved." Even in the short time that cases have been under treatment in this country there have been already reports of so-called complete cures recurring. However, it must be stated that in some cases remarkable improvement has occurred, not only in comparatively recent cases but in some chronic cases treated for statistical purposes. It would appear as if this form of therapy is a highly satisfactory one, although not to the extent that was originally reported. It is felt that at the present time the method is still strictly a problem of research rather than one of general therapeutics. Different modifications of the original treatment have been made by different workers. The lack of a proper understanding of the reasons for results has accentuated the trial and error method of treatment, in an endeavor to establish a well recognized and routine technique. For this reason at the present time the hypoglycemic treatment of dementia praecox must be considered a strictly research problem to be conducted only under trained workers in a properly equipped and organized hospital with medical and nursing facilities which have been centered upon the requirements of this method.

AT THE present time physicians in State Hospitals are besieged daily by requests for treatment of their friends and relatives in the hospitals, regardless of their diagnoses. The tremendous newspaper publicity is regarded to a great extent as responsible for this demand. However, there has been little stress placed in lay articles on the fact that this treatment is not a method for all types of nervous disorders but is confined to a selected group. As Dussik and Wortis stated at the Medical Society of the State of New York meeting at Rochester, New York, in May of this year, the treatment so far has been confined mostly to cases of schizophrenia. However, there is some promise that it might also be of value in other types of functional psychoses. Dussik reported some favorable results in cases of psychoneuroses, manic-depressive psychoses, and also in treatment of the schizophrenic reaction type of general paresis following treatment with hyperpyrexia such as malaria. For this reason attempts have been made to limit to some extent the publicity in newspapers and magazines in order not to awaken too enthusiastic hopes in the

hearts of relatives that a panacea for all types of mental disorders has been discovered. However, one definite fact remains, and that is that here is apparently a new method of application which causes in many cases a greater and more rapid remission of symptoms than any other type of treatment which has so far been used. The treatment seems in many cases to allow the patient to leave the hospital in a much shorter period than he would otherwise. When it is considered that in New York State alone approximately 66,000 patients are confined in State Hospitals, of whom about 50 per cent are cases of dementia praecox, the problem of the treatment of this disease and its remedy is seen to be of tremendous importance, not only to the individual but to the state. While we must admit that little can be done for many of the chronic or old cases at the present time confined in the State Hospitals, nevertheless, the feeling prevails that by means of this treatment, the new or incoming cases of dementia praecox may be benefited to a large extent and may be prevented from regressing and deteriorating to a type of ailment that may require institutional care for the rest of their lives. The restoration of such individuals to society would be a tremendous step if the treatment continues to show the promise that it has in the past year. However, again it is emphasized that before a proper evaluation of the treatment can be made a period of at least three to five years must elapse. The determination may possibly be made in very much the same way as an alleged cancer cure would be evaluated, since dementia praecox has always been regarded as one of our most malignant mental disorders.

Summary

1. The organic and biological theories of the etiology of dementia praecox have again been brought into discussion and their real merits considered.

2. Two new treatments have been described, namely, metrazol and insulin hypoglycemic shocks.

3. The metrazol treatment, while not as subject to intensive research, appears to be very favorable.

4. Hypoglycemic treatment appears to cause an improvement in 40 to 70 per cent of cases of dementia praecox. The more recent cases, that is, under six months, show the most marked results, while the figures for the more chronic cases show a decreasing benefit with the duration of the disease, with, however, occasional exceptions. The method is still unstandardized and should be used only by trained workers under a special environment. It is not a home or office treatment.

5. A new era in the treatment of dementia praecox has been opened and there is some very great promise of much more favorable results in the outcome of this disease than in the past.

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1600 SOUTH AVENUE.

MENTAL HYGIENE NOTES

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WHENEVER any of these faulty reactions are observed in children, they should be considered as symptoms of a condition which demands correction.

To Gain a Feeling of Importance a person may resort to the following methods:

1. Criticizing every one and everything.
2. Gossiping.
3. Reforming others.
4. Snubbing others.
5. Converting others.
6. Keeping others waiting.
7. Demanding service.
8. Domineering over others.
9. Shocking others.
10. Taking unnecessary risks.
11. Tantrums.
12. Invalidism.
13. Stealing, lying, firesetting.

All of this comes under the heading of fooling oneself and not facing reality and the whole thing is based on:

1. Lack of security and confidence in oneself.
2. Lack of independence.

Other methods of fooling oneself:

1. Justifying one's improper behavior.
2. Excusing oneself for one's failure.
3. Blaming one's failure upon some other person or circumstance.
4. Believing one's present status is satisfactory.
5. Making one's irrational behavior seem rational.

Peculiar behaviors:

Posing, touchiness, adopting lofty goals, predicting events, purporting to be inventing something, talking over others' heads, boasting, disparaging oneself, daydreaming, reminiscing too much.

ENCYSTED TRICHINAE

THOMAS B. MAGATH, Rochester, Minn. (*Journal A. M. A.*, June 5, 1937), examined muscles from bodies of 220 patients from the Mayo Clinic who had died of various causes. While these patients had come from various states, most were from the North and the Middle West. They had been for the most part well to do but were not selected in any way. They died in 1935 or 1936. Almost all were adults. Pieces of the following muscles were procured: diaphram, intercostal muscles, rectus abdominis and sternocleidomastoid. About 2 Gm. of each was compressed and searched with a binocular microscope equipped to magnify twenty-five times. Trichinae were found in seventeen bodies.

INTRA-UTERINE RESPIRATORY MOVEMENTS OF THE HUMAN FETUS

FRANKLIN F. SNYDER and MORRIS ROSENFELD, Baltimore (*Journal A. M. A.*, June 5, 1937), point out that respiration is not initiated in the child at birth but extends far back into embryonic life. Instead of a state of complete apnea during intra-uterine life, the human fetus shows spontaneous respiratory movements for periods lasting many minutes. The capacity of the human fetus to show respiratory movements within the uterus for brief intervals was recognized by Schultze. Respiratory failure of the newborn, or asphyxia neonatorum, must be regarded as a suppression of previous activity rather than failure of some new mechanism to begin functioning at birth.

Cancer

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THE COUNTY CHAIRMAN AND *Lay Education*

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THE New York State Branch of the American Society for the Control of Cancer has appointed through its Executive Committee and Board of Directors a physician in each county who has been designated as the Chairman for that area. Some of these Chairman have been very active. Others have accepted it as an honorary position and have done nothing. The object of the New York State Committee of the American Society for the Control of Cancer is to stimulate and conduct lay education throughout that state.

A County Chairman can be instrumental in acquainting the people of his community with cancer knowledge. Lay education today is one of the important elements in the solution of the cancer problem. We have the cure for cancer; namely, surgery, radium and x-ray, but the patients must learn to present themselves when their malignant growths are curable. It is easier, of course, to cure cancer in the earlier stages although at times far-advanced cancer responds miraculously to adequate treatment. As Dr. Bloodgood so often said: "If every doctor, dentist, nurse and lay person knew all they should know concerning cancer, the mortality would be reduced 50 per cent."

If a county Chairman is alert, he can, in his own community or in his own county, use many methods for the education of lay people. Popular talks covering the salient facts about cancer can be given in a clear, understandable fashion. Information for these talks can be obtained from the offices of the National Society in New York City, from the New York State Branch, from the American Medical Association, from the Division of Cancer Control of the New York State Department of Health or from the American College of Surgeons, as well as from the many books which have been written about these diseases.

AT TIMES popular talks do not fit into the program and some groups prefer having illustrated lectures. Moving pictures can be obtained from the New York State Committee or from the National Society. Doctors may illustrate their talks by means of lantern slides which

Read at a meeting of the County Chairmen of the Cancer Committees of the Medical Society of the State of New York and of the New York State Committee of the American Society for the Control of Cancer, held in Rochester, May 25, 1937.

can be secured through the New York State Department of Health, Division of Cancer Control. Of course, the amount of work to be done by the State Department is limited on account of the few men available for such service. Film strips are also available. They illustrate a simple cancer story that can be comprehended by all types of audiences. Through the Educational Department of the State Department of Health, one can obtain recordings made from little plays broadcast over Station WGY at different intervals. These playlets present another phase of the cancer problem and audiences seeking entertainment along with their education will welcome them.

Another form of cancer education which is gaining favor among the lay groups is the placing of popular exhibits at county fairs, state fairs, community gatherings, industrial and better homes exhibits, municipal expositions and the like. Another group who are always cooperative in a cancer educational program are the business men whose large store windows may be made available for the use of cancer exhibits. It is not only an asset to the store in which this exhibit is placed but it is also a good method of disseminating cancer knowledge.

IT IS needless to say that a county chairman cannot do all of this work himself. A good plan to adopt would be to effect cooperation between the county medical society and the county chairman after which a committee could be appointed to supervise the cancer campaign of their particular neighborhood. Out of this committee they could appoint a speakers' bureau consisting of three members in the small county societies and five members in the larger ones. The members of the speakers' bureau will be furnished with cancer literature that is available.

The Executive Secretary of the New York State Branch of the American Society for the Control of Cancer is available on request to coach the speakers and to arrange for addresses. The Division of Cancer Control also has men on the staff who are willing to give talks.

THE American Society for the Control of Cancer proposes to enlist the women of the Nation in a Women's Field Army. The active canvass will be held in the spring. This will provide an excellent opportunity to secure cooperation from a large group of women. These women are willing to work and cooperate in every way with the medical profession. One active chairman selected doctors' wives, members of the County Society auxiliary, as officers of the Women's Field Army in his locality. This is a splendid plan as it brings the local organizations of the Women's Field Army into close alliance with the County Medical Society. The Women's Field Army is in its infancy and in years to come is expected to increase its membership and to expand its program. So I believe that physicians should become interested in this organization, watch it, advise it, and supervise its activities.

It is difficult to know what groups will be more responsive to this type of education. I think that if properly approached, the civic clubs—Kiwanis, Lions, Quota, Rotary, and Zonta—would be a very fertile field. These organizations may in time induce local radio stations to allow the cancer committee some time for the dissemination of cancer knowledge by way of the air.

Women's clubs seem eager for this information. The Federation of Women's Clubs usually has an annual cancer program. They participate in other public health projects and will also become interested in cancer education. Parent-Teacher associations, Y. W. C. A.'s, mothers' clubs and church societies are a few of the women's organizations which are eager and willing to cooperate. As for the men, church groups, volunteer firemen, granges, farm bureaus, political and civic groups have made requests during previous years for these talks. High school and junior college students are very much interested in cancer lectures but some of the executives of such institutions are fearful of presenting this subject. It has been the experience of those interested in cancer education that high school students are a favorable group in which knowledge concerning cancer can and should be spread: they are the people who will have cancer in twenty or thirty years. Normal schools and colleges take more readily to this kind of education, probably due to the fact that the students are older.

I BELIEVE the type of lecture that should be given is one dealing principally with accredited knowledge concerning the disease. Any information that is disseminated to the lay people should be authentic and not guesswork on the part of the speaker. Cancer knowledge can be obtained from books and also from practical experience. Perhaps the best speakers for lay audiences are those doctors who have had a wide acquaintance with the disease and who in story form can relate their experiences. Lay audiences like to hear a narrative and are apt to become bored when they must sit and listen to cold facts. The object of all discourses should be to abolish the existing fear of cancer. Fear is usually the result of ignorance and the best way to obliterate ignorance is by supplanting it with knowledge. If during the talk it can be pointed out that cancer in the early stage is more amenable to treatment than if seen late, the percentage of cures would sharply rise. It is also well to advise periodic check-ups by the family doctor.

The audience should be informed of the means available for the treatment and diagnosis of cancer in its respective community. Recently while making a tour of Kansas for the State Medical Society, many people following the lay talks would inquire what cancer facilities were available in the town in which they lived. I think that physicians should consider it their duty to tell the people of their vicinity where they can obtain treatment and what doctors are equipped to render adequate attention to patients with cancer.

The amount of good that a county chairman can do depends upon the amount of effort and enthusiasm he puts to the task at hand. We fully realize that there is no compensation and little glory in this type of work, but we have learned from the experience of the tuberculosis group that the way to reduce the mortality from cancer is to spread far and wide knowledge concerning the symptoms of this disease, the methods and results of treatment. This should be done by the medical profession. It is the medical profession's task and opportunity to do something for a disease which every year takes a toll of 150,000 lives in the United States and 18,000 lives in New York State alone.

If a county chairman is not enthusiastic about this work, he should turn it over to some other member of the county society who believes in telling lay people what they should know about their own bodies. The result of this crusade against cancer would mean more patients coming to the doctors' offices when their cancer is in the curable stage. It will also give doctors opportunity to treat precancerous lesions and thus prevent the disease. A county chairman who is progressive and interested in his task will ultimately be compensated by bringing honor and success to himself and a decrease in the cancer mortality to his community.

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BOTULISM CAUSED BY HOME-CANNED WILD MUSHROOMS

R. B. LINDSAY, Cokeville, Wyo.; J. R. NEWNAM, Kemmerer, Wyo., and I. C. HALL, Denver (*Journal A. M. A.*, June 5, 1937), state that it is surprising that in all the literature on mushroom poisoning summarized by Ford, Damon and Jordan, one finds no reference to outbreaks which might have been due to botulism, and in all the literature on botulism they have found only one outbreak due to mushrooms, although Bachman in 1919 "isolated an organism from home-canned mushrooms which was morphologically and culturally like Clostridium botulinum" and which "grown in meat, produced a toxin which when fed to chickens produced symptoms similar to limberneck." Probably one reason for the scarcity of botulism after eating mushrooms is that, although they must frequently harbor the spores of Bacillus botulinus from the soil, they are generally eaten while fresh or after preservation by drying and only rarely after home canning. Possibilities exist for clinical confusion of botulism and mushroom poisoning (mycetismus).

Economics

Department Edited by Thomas A. McGoldrick, M.D., LL.D.

THE MEDICAL WORM TURNS IN BRITISH COLUMBIA

THE physicians of British Columbia have refused to serve under the compulsory health insurance mandate of the government at a dollar for the *first* call by day and a dollar and a half at night, with corresponding rates for other services.

Everything was nicely arranged by the uplifters. The measure was passed in 1936 through a deal with the Socialst wing of the opposition, and the Provincial Secretary has been hard at work ever since making preparations for its enforcement. He leased a large building and hired an army of statisticians and "socialicians." A beautiful set of regulations was worked out by these bureaucrats, the act having left details to the organization that was to be created.

Services were announced as "mandatory" and "permissive" benefits, the latter dependent upon funds being available at some future date. The mandatory benefits included the services of the doctor.

Oddly enough, nobody had thought of consulting the medical profession for the purpose of obtaining their views and their consent. It was just as though the uplifters and the government had arranged to take over the conduct of the "cure of souls," without benefit of the clergy's opinions or consent.

Sensibly enough, the medical men "decided to have nothing to do with the scheme," lit their pipes, smiled amiably, and looked away.

It seems now that the government and people of British Columbia are bewildered, and "nobody seems to have any idea what to do," although the silly thing, remember, is a *mandate*. Coercion has been talked about, with its proponents looking rather foolish the while.

The law of the country is suspended through this incredible blunder on the part of the uplifters and politicians, and $83,900 has been spent by the bureaucrats.

Although a plebiscite on the question has been held, nothing but further confusion has emerged out of the muddle. One hundred thousand of those who went to the polls voted blank ballots on the question.

The government's sick chicken has come home to roost. The future of the sorry scheme is in doubt.

It seems to us that this episode in British Columbia is weighty in significance for American Columbia, that is to say, the United States. Our Canadian brethren have set us a fascinating example in a cockeyed era.

We are unable to think of *any* form of compulsory health insurance that would not merit identical contempt. We suppose the time is near at hand when American medicine will have to strengthen its defenses. Pending that time, it can do no better than to study the British Columbia physicians' policy for precedent in dealing with the political Marx brothers who threaten us with ruin.

A. C. J.

AMERICAN MEDICAL ASSOCIATION'S ACTION ON PREVENTION OF CONCEPTION AND OTHER PROBLEMS

Seldom if ever has there been a session of the House of Delegates of the American Medical Association attended with more nation-wide interest than has developed from the annual session of 1937. The actions of the House of Delegates recorded in the current issue of THE JOURNAL are an indication of the numerous problems that concerned the delegates. Aside from matters that specifically affect the intimate work of the organization and of the headquarters office, special recommendations were introduced dealing with motor vehicle accidents, with a change in the methods of choosing the time and place of the annual session, with the prescribing of barbituric acid and derivative drugs, with the campaign against syphilis, with various problems involving governmental action in relationship to medical practice, with the creation of a distinguished service award, with legislation on medical defense, with the practice of ophthalmology, with psychiatric research, and with many other subjects.

The numerous representatives of the press who besieged the House of Delegates, both in and out of executive session, did their utmost to present an accurate picture of the events that occurred. Unfortunately, by modern methods of news gathering and publication, the story written on the spot may be subjected to editing in the publisher's office; moreover, headlines are invariably written far distant from the scene of action and under the pressue of limitation on time. The reason for these animadversions is the furor that has been created to lack of understanding of just what the House of Delegates did, particularly on the subject of the prevention of conception.

Attention is called first to a most significant statement in the opening remarks of the committee. The committee said:

The present report of the committee is limited to a consideration of the prevention of conception only as it refers to the relationship of physician and patient.

If any interpretation of this succinct and clear statement is made, it follows in the next paragraph, which emphasizes the fact that there is no law to prevent doctors who work in dispensaries from furnishing indigent patients with any information that may lawfully be furnished to private patients. "In all cases," says the report, "the legal justification is the medical need of the patient." For this reason the committee of the House of Delegates emphasizes particularly its belief that "all dispensaries, clinics and similar establishments where information and advice concerning the prevention of conception are given to the public . . . should be under legal licensure and supervision and under medical control." Later the committee again points out that it is concerned only with the frequent occurrence in medicine of indications for the prevention of conception, and for that reason the committee recommended that the medical aspects of both sterility and fertility should be taught in medical schools. Recognizing further that the intelligent, voluntary spacing of pregnancies may be desirable for the health and general well being of mothers and children, the committee points out, and the House of Delegates accepted the fact, that no arbitrary interval can be stated, that innumerable factors must be considered from a health point of view, and that each case must be determined by the individual judgment of parents and physicians, based on the conditions present.

The conclusions as accepted by the House of Delegates, appear in this issue of THE JOURNAL on page 2218. The wish of the House of Delegates is made especially clear in its addendum to the report of the committee; namely, "emphasizing the fact that all considerations in this report on the subject of the prevention of conception have their application only in conditions arising in the relation of physician and patient."

Of utmost significance are the amendments to the Constitution and By-Laws of the American Medical Association which are brought out in full on page 2216. The term "contract practice" is now defined to include agreements which involve political subdivisions as well as the agreements between physicians and corporations or organizations. Moreover,

—Continued on page 429

Contemporary Progress

+ Rhinolaryngology +

Tonsillectomy in Peritonsillar Abscess

F. W. MERICA (*Archives of Otolaryngology, 25:520, May, 1937*) reports the treatment of 21 cases of peritonsillar abscess by tonsillectomy at the time of the formation of the abscess. In all of these cases recovery was rapid and complete without any complications. The great advantage of tonsillectomy in cases of peritonsillar abscess is that it relieves the "distressing" pain which is the outstanding symptom of the disease; and also relieves the toxemia. Within twenty-four hours the patient shows definite improvement, as noted in the author's cases; the fever has begun to subside; and some nourishment—at least fluids—can be taken. In one of the author's cases, the abscess was so situated that incision for drainage through the usual site would have missed it, but after removal of the tonsil, the wall of the fossa bulged medially and fluctuation was felt; incision was made near the lower part of the fossa and the pus evacuated. In doing tonsillectomy for peritonsillar abscess, the author employs general anesthesia, as this gives a better exposure than a local anesthetic, because these patients have difficulty in opening their mouths. The suction machine is employed, and there is little danger of aspiration of pus with the patient in a recumbent position. The tonsil on the side of the abscess is first removed, slight traction is exerted on the tonsil in the upper portion and dissection is started so as to free a portion of the upper pole before the abscess is ruptured; then with the tip of the suction machine "following the knife" the incision is made into the abscess cavity and the abscess drained completely. The tonsil is then easily lifted from its bed, loosened from the anterior and posterior pillars "with a small amount of dissection," and removed with a snare. The bleeding that occurs, the author has found, is best controlled by electrocoagulation; in cases in which this method has been used, the patients have less postoperative pain. After this procedure is completed and the bleeding controlled the opposite tonsil is removed, so that the patient does not have to undergo a second operation at a later date.

A. HEINDL (*Monatsschrift für Ohrenheilkunde, 71:412, April, 1937*) reports 58 cases of peritonsillar abscess or peritonsillar phlegmon in which tonsillectomy was done; 31 of these were

peritonsillar abscess in the acute stage; 4 cases in which hemorrhage had followed incision for drainage, one a case of abscess caused by a foreign body; the remaining 22 cases were phlegmons before the formation of a definite abscess. In 56 of these cases only one tonsil was removed. In the 31 cases of acute peritonsillar abscess, the temperature fell to normal on the day after operation in 23 cases; in 7 others it became normal on the second day, after a temporary rise; only in one case fever of a slight degree persisted after the second day; this was a case in which both tonsils were removed. In the 4 cases of hemorrhage, bleeding stopped and the temperature fell promptly after operation. In the case of abscess due to a foreign body symptoms had been present for eleven days; the local symptoms were promptly relieved, but enlargement of the regional glands and renal symptoms that had developed prior to operation persisted for a time with some fever. In the cases of peritonsillar phlegmon, beginning abscess formation was found in only 9 instances. The postoperative course was less satisfactory than in cases of frank abscess, but all patients ultimately recovered. The author notes that, at the Clinic of the University of Vienna from which this reports comes, tonsillectomy has been employed with increasing frequency in the treatment of peritonsillar abscess, especially in deep-seated abscess, where incision fails to drain the pus or relieve symptoms, and in cases with septic temperature, hemorrhage, or any general complication, such as renal or joint symptoms.

Oral Immunization to Colds

G. E. ROCKWELL, H. C. VAN KIRK and H. M. POWELL (*Journal of Laboratory and Clinical Medicine, 22:912, 1937*) note that they have previously reported the use of a heterophile vaccine given by mouth in the prevention of colds. These studies showed a decrease in the incidence of colds of approximately 45 per cent. in persons taking the vaccine as compared with control groups. During the winter of 1935-1936, the authors have made a further test of an orally administered vaccine in 100 persons, with 100 controls of similar age, occupation, and environment. The number of colds suffered per year in the past (average of three years) was determined for each person, and was approximately the same in the test and the control groups. The vaccine used consisted of a mixture of the bacteria infecting the respiratory tract, selected for their heterophile content and their ability to resist the gastrointestinal secretion. The vaccine was put up in gelatine capsules, each capsule containing pneumococci, 25 billion; *H. influenzae*, 5 billion; streptococci, 15 billion; and *M. catarrhalis*, 5 billion. One capsule was taken with half a glass of cold water at least half an hour before breakfast, for seven consecutive mornings; and thereafter one capsule a week for the rest of the season. It was found that the persons taking the vaccine showed a 77.8 per cent. decrease in the number of colds; those in the control group a 10.1 per cent. decrease; making an essential decrease attributable to the vaccine of 67.7 per cent. The controls had a total of 375 colds during the winter season, the vaccinated persons only 94 colds, while in the past the two groups had had approximately the same number of colds each year; this represents a decrease of 281 colds, or 74.9 per cent. In one group in a boy's institution, where the vaccinated group and the control group were closely associated and carried on the same activities, the reduction in the number of colds in the vaccinated group was 70.8 per cent. It was also noted that there was a marked decrease in the days of illness from all causes in the vaccinated, as compared to the control group.

Nasal Obstruction in the Adult

H. J. STERNSTEIN (*Archives of Otolaryngology, 25:442, April, 1937*) describes an apparatus devised to determine how much resistance air encounters in passage through the nasal airways independently of voluntary nasal breathing. A series of 140 experiments were made in 32 subjects, including one group of persons with normal nasal tract without blockage, and another group with blockage or disease of the nasal tract. In the normal group resistance measurements were found to be low and could be charted within a typical zone. When a 0.5 per cent. of aqueous solution of cocaine hydrochloride was employed to

shrink the nasal passages, the shrinkage capacity in this group, as determined from the resistance readings before and after shrinkage, gave a specific index of 35 per cent. In the group with nasal blockage or disease, the resistance readings were found to be characteristically high; when charted the readings fell in two typical groups for partial and complete nasal obstruction. Measurement of the shrinkage capacity gave an index of 75 per cent. for partial nasal obstruction, and 90 per cent. for complete nasal obstruction. The author found that the gross structural findings did not accurately indicate the amount of nasal obstruction as determined by the method described. The apparatus is simple and the procedure suitable for practical office work. The author is of the opinion that the method "offers a valuable adjunct in the diagnosis and treatment of nasal obstruction."

Color Motion Pictures of the Larynx

F. L. LEJEUNE (*New Orleans Medical and Surgical Journal, 89:636, May, 1937*) reports that he has been able to make successful color motion pictures of the larynx with the Morgana process. With this method negatives are obtained that can be preserved; when the pictures are projected a good reproduction of the natural colors is obtained. The first requisite for successful pictures of the larynx, the author notes, is a good exposure of the laryngeal structures. For this he uses the suspension laryngoscope, and a combination of gas-oxygen and ether anesthesia. He considers the complete relaxation obtained with general anesthesia necessary for successful laryngoscopy as well as for photographing the larynx. With this method, he has been able to secure excellent pictures in natural colors of tumors of the larynx; also two views of foreign bodies have been obtained—the first photographs of foreign bodies in the hypopharynx or larynx reported, as far as the author can determine. In cases of tumors or other lesions, a photograph is obtained both before and after removal or cauterization of the lesion, thus visualizing the results of surgical interference. Illustrative cases are reported, the colored motion pictures of which were presented before the author's local medical society (Orleans Parish Medical Society).

+ Otology +

Clinical Observations on Bone Conduction

W. J. MCNALLY and his associates at the Royal Victoria Hospital, Montreal, Canada, (*Journal of Laryngology and Otology, 52:295;375, May and June, 1937*) report hearing tests and especially a study of bone conduction in cases of intracranial lesions. Bone conduction was tested by three methods in each case: Tuning forks, the monochord of Van Struycken, and the audiometer bone conduction attachment. While some of the tests had to be carried out in the wards because of the serious condition of the patient, these tests were repeated, whenever possible, in a quiet but not absolutely sound-proof, room. Hearing tests were made in 13 cases before and after encephalography or ventriculography, because of the effect of these procedures on intracranial pressure. There was no appreciable change in hearing noted in these cases following encephalography or ventriculography. Some of the patients did show hearing losses before the procedure, but these remained unchanged. In 14 cases hearing tests were made after removal of cerebral tissue (including one patient from the preceding group). In this group 5 patients showed definite loss of hearing; one an abrupt high tone loss; 3 a gradual high tone loss; and one an audiogram "dip" at 4,096 d.v. Nine patients were tested after the removal of cerebral tumors; 7 of these showed some hearing loss postoperatively. In one the loss of hearing was consistent with the patient's age and could not be referred to the intracranial lesion; in another it was of middle-ear type and apparently due to old middle-ear disease: in a third case a radical mastoidectomy had been done two months previous to the intracranial operation and no hearing tests made between the two operations. In 2 cases there was a gradual high tone loss and in 2 an audiogram "dip" at 4,096 d.v. In 6 cases in which a cerebellar abscess or tumor was removed, 3 showed loss of hearing after operation, characterized by an audiogram "dip" at 4,096 d.v. in one case, and abrupt high

tone loss in 2 cases. In 4 cases of eighth nerve tumor, the pre-operative tests showed a high grade nerve deafness on the side of the tumor. In 5 cases of intracranial lesions of a miscellaneous type, 3 showed some loss of hearing postoperatively; in one of these this loss was a gradual high tone loss. In this series of 50 patients, the presence of an intracranial lesion was confirmed at operation or autopsy in 37 cases. In 22 of these there was some hearing loss, but only in 4 cases of eighth nerve tumor was there a marked and characteristic loss of hearing. Only slight variations in results were noted with the various methods of testing bone conduction. No evidence was found that the tests with the bone conduction attachment of the audiometer gave either more or less reliable results than the tuning fork tests. In testing bone conduction with the monochord, the results are apt to be misleading unless accompanied by masking. In certain cases the bone conduction tests by the various methods were not consistent, nor did they agree with other tests. This indicates that none of the present tests are sufficient in themselves. Increased bone conduction was noted in some patents in whom obvious nerve deafness was present, or when the eighth nerve on the side of the increased bone conduction was known to be severed. The authors offer no explanation for this. It was found that in testing bone-conduction, notes in the vicinity of 512 d.v. give the most reliable results. The authors state that the most practical conclusion to be drawn from their findings is that a true diagnosis can be reached only by doing both air and bone conduction tests "by a variety of methods accompanied by suitable masking and by a vestibular examination."

Structural Alterations in the Petrous Portion of the Temporal Bone in Osteitis Deformans

B. J. ANSON and J. G. WILSON (*Archives of Otolaryngology, 25:560, May, 1937*) present a detailed study of the petrous portion of the temporal bones from a man with osteitis deformans (Paget's disease), dying at the age of fifty-nine years. They give a brief review of the literature, and refer to another case reported by them in 1936. They note that in the case described in this article, the pathological changes in the temporal bone were "more widespread and more destructive" than in their previous cases. From their findings they conclude that: The petrous portion of the temporal bone in osteitis deformans (Paget's disease) becomes highly spongified bone—a condition recognized as characteristic of long bones in this disease. This histological change is so marked that it may be recognized in sections by examination with the naked eye. Microscopic study of the sections show that osteolysis is due to resorption by osteoclasts lodged in Howship's lacunae; trabeculae are reduced to thin spicules. Osteolysis is accompanied by osteogenesis, but of a "haphazard and uncontrolled" type; the normal lamellar plan is wanting. The new as well as the old bone is subjected to this cycle of bone resorption and formation, with resulting resorption lines that become cement lines when new bone is deposited, thus forming the "mosaic architecture" (Jaffe) that is a characteristic feature of Paget's disease. The marrow is changed to a fibrous tissue, fat free and vascular. While the changes in the diploic portion of the temporal bone are in every way similar to those in the long bones, the authors note that some factor seems to lessen or delay the invasion of the compact periotic capsule. The presence of intrachondrial bone and the lower vascularity of the area may be factors in the resistance of this portion of the temporal bone. The changes that do occur in the periotic capsule are more marked in the area situated anterior to the vestibular window, *i.e.*, between the stapes and the cochlea, than in the area posterior to the vestibular window. In the case reported the area external to the cartilage of the vestibular window was excessively spongy. The patient had been deaf in the left ear for twelve years and became totally deaf in the last few months before death (without suppurative discharge or pain).

Otitic Streptococcic Meningitis with Recovery

S. P. SHECHTER (*Archives of Otolaryngology, 25:266, March, 1937*) re-

ports a case of otitic streptococcic meningitis in which streptococci were present in the spinal fluid on three occasions, once before and twice after the mastoidectomy operation. Aside from the modified radical mastoidectomy and a subtemporal decompression to remove the focus of infection, no "extensive surgical, serologic, chemical or physical procedures" were employed in the treatment of this case, yet the patient recovered. Improvement was noted immediately after the operation and the two postoperative spinal taps. The bacteria recovered from the spinal fluid showed normal staining reactions, but could not be successfully cultured. It is possible that this indicates a low virulence or bactericidal properties of the spinal fluid, which, combined with the early removal of the focus in this case, contributed to the patient's recovery.

In the same number of this journal (*Archives of Otolaryngology, 25:311, March, 1937*), H. DINTENFASS reports another case of recovery from streptococcic meningitis of otitic origin. In this case symptoms of meningitis developed after mastoidectomy. A dural incision was made over the middle fossa and the foot of the patient's bed was raised to induce a free flow of cerebrospinal fluid. Streptococci were isolated from the spinal fluid prior to this procedure, and after operation antistreptococcus serum was given intraspinally, repeated every twelve hours for five days. As the spinal fluid showed no streptococci just prior to the first administration of the serum, the author is of the opinion that recovery cannot be attributed to this treatment. He suggests that the postural treatment to secure free drainage through the dural incision may have been of more value.

Operation for Osteomyelitis of the Inferior Aspect of the Petrous Pyramid

M. C. MYERSON, R. BLUMBERG and H. W. RUBIN (*Archives of Otolaryngology, 25:373, April, 1937*) note the importance of procuring a surgical approach to the inferior aspect of the petrous pyramid in cases of osteomyelitis involving this portion of the bone. An operation has been devised by the authors in which the approach is by way of the lateral cervical region through the retropharyngeal space to the quadrilateral plate of bone that constitutes the floor of the carotid canal. This bone, when not diseased, is thick and hard. In carrying out this operation on the cadaver, the bone must be removed by a bur placed accurately in the quadrigeminal plate, away from the carotid artery laterally, and used in a posteromedial direction. But in a patient suffering from osteomyelitis of the inferior aspect of the petrous pyramid, the operator would find pus or softened bone or both, so that an opening could be made through it and drainage secured without using the bur. In doing this operation an indirect intubation tube *must* be used during the operation to avoid asphyxia. The authors report one case in which this procedure was done; the quadrilateral plate of bone was greatly softened; an opening was made with a special ball-tipped probe, and pus was released immediately through this opening; the pus was aspirated from the wound and a rubber drain inserted. The patient was recovering without complications a week after the operation. The authors describe this technique in detail; they note that no surgeon should attempt this operation without some preliminary work on the cadaver; and the inferior aspect of the patient's skull should be carefully studied before operating.

+ Gynecology +

The Technic of Timing Human Ovulation by Palpable Changes in Ovary, Tube, and Uterus

R. L. DICKINSON (*American Journal of Obstetrics and Gynecology, 33:1027, June, 1937*) notes that in his experience he has found that it is possible to detect definite signs of ovulation by palpation, in women who are willing to submit to examination from month to month. The patient "of most value" for such studies is one who has some midinterval symptoms indicating ovulation, such as "breast ache," slight "show" of blood, mucous discharge, localized pain or discomfort, especially if the patient can elicit tenderness in one lower abdominal

segment by deep pressure with her own fingertips. For satisfactory palpation study of human ovulation, there must be a minimal amount of adipose tissue in the lower abdominal wall; the abdominal wall and pelvic floor should not be too tense (as in some athletic women); the ovaries should be mobile; the uterus should be fully displacable forward, and preferably "given to well-marked rhythms of contraction and relaxation." For making the examination, a table should be used that permits tilting the trunk to a steep Trendelenburg; the knees should be in abduction and fully supported; in some women it is advantageous to place a cushion under the buttocks; in some flexion of the thigh on the trunk is of aid, in others not. Thus the details of the method must be adapted to the individual to define the ovary to the best advantage. The findings most characteristic of ovulation are swelling and tenderness of both ovaries, but much more marked on one side than on the other. At the time of unilateral ovarian enlargement, the uterus shows a change in consistency, somewhat like that of early pregnancy; softening of the isthmus may be present or any one of a variety of grooves or ridges on the corpus, isthmus or fundus. The chief change noted was contraction and relaxation on rhythm running from two to ten or even twenty minutes. A variation of varicosity in the broad ligament may also be noted with pronounced unilateral increase at midinterval. The observation of these midinterval changes indicative of ovulation may be made with good results by gynecologists who give the pessary a "fair trial" in the treatment of mobile retroversions. Illustrative cases are reported.

COMMENT

Dickinson's technic of palpating definite ovarian and uterine changes in the timing of ovulation in the human is theoretically ideal but not very practical. For obvious reasons such evidence cannot be standardized because of the "personal equation" in the interpretation of what is palpated. It's a way! but sooner or later we should have a more practical method—and no doubt we will.

H.B.M.

The Status of Vaginal Hysterectomy in Gynecological Surgery

C. H. TYRONE (*Annals of Surgery, 105:901, June, 1937*) reports 206 cases operated by vaginal hysterectomy; there was only one operative death in this series, a mortality of 0.48 per cent. Convalescence was smooth and rapid; the average number of days of hospitalization was twelve. Follow-up study has been made of 160 of these patients; there was complete relief of all uterine symptoms in all but one case, except for slight vaginal discharge in 6 cases; 2 patients showed slight bladder symptoms and 3 dyspareunia. The chief symptoms prior to operation were leucorrhea and backache; 181 patients also showed urinary symptoms. Operation was done in these cases because both the body of the uterus and the cervix were diseased. There were 38 cases of uterine fibroids, and 148 cases of fibrosis; 43 cases with procidentia, 190 with cystocele, and some laceration of the perineum in all. It is in such cases, the author has found, the vaginal hysterectomy, combined with perineorrhaphy when necessary, gives better results than more conservative measures, and has definite advantages over abdominal hysterectomy.

COMMENT

Vaginal hysterectomy is not performed in America as frequently as it is in some other countries—notably Germany. It should be resorted to much more frequently. When the technic is good and indications correct, the results are excellent. Morbidity and mortality are much lower than in abdominal hysterectomy.

Vaginal hysterectomy under local anesthesia is ideal in selected cases. Try it! but be sure of your indications.

H.B.M.

Ventrosuspension of the Uterus with Living Sutures

E. M. HODGKINS (*American Journal of Obstetrics and Gynecology, 33:559, April, 1937*) notes that in the treatment of retroversion of the uterus when a surgical method is indicated, some type of fixation of the round ligaments has been found to give most satisfactory results. He has used the Olshausen technic most frequently, but has had his "proportionate share" of disappointing results due to rupture of the sutures and sepsis. He has sought, therefore, to avoid these complications by using living suture material. For this purpose strips of fascia

from the anterior rectus sheath, ⅜ of an inch wide, are employed. The rectus muscle fascia rather than fascia lata is used, because of ease of handling, and also avoidance of an unsightly scar in the thigh. With this suture material there is "practically no variation" from the usual Olshausen technic, except that the fascial suture is fixed on the anterior surface of the muscle and covered by rectus sheath; it might be drawn through the sheath and fixed on the anterior surface as in the usual operation, but this is not necessary. With the use of this suture material at permanent tendinous band is formed, and the round ligament is "anchored" permanently to the unyielding abdominal parietes at the level desired. In closing the rectus muscle sheath all small vessels should be tied off with meticulous care, as a moist wound delays healing. If there is any uncontrollable capillary bleeding a rubber drain may be placed in the midportion of the incision and removed within forty-eight hours. This operation has been used only in selected cases to determine "the logic of the mechanism" and to compare the results with those of the orthodox procedures in a larger series of cases. Twenty-seven patients from twenty-three to twenty-four years of age have been operated by this method; 4 had virginal retroversion, 23 varying degrees of procidentia, in which vaginal repair was also done. Six of these women have become pregnant since the operation was done (including one patient with virginal retroversion); all had normal pregnancies with no untoward symptoms and were delivered at term with the use of low forceps and episiotomy. None of these patients had difficult labor or any complications in the puerperium. The first patient was operated more than five years ago and has been delivered of a normal child; recent examination of this patient has shown the uterus in erect position and the adnexa normal. The author's report on this method is distinctly a preliminary report, but he recommends its trial in a large series of cases as "thoroughly safe for gynecologic surgeons to use."

COMMENT

Why make a complicated operation of a very simple one? Furthermore, why cut fascial strips from the rectus sheath when catgut or silk (ready made!) will serve the same purpose? Your commentator cannot agree to such procedures, but prefers the usual simple technic of one of the many operations devised for the correction of retroversion, using catgut or silk sutures. We suspect a certain small percentage will re-occur irrespective of the kind of suture material used.

H.B.M.

+ Obstetrics +

Trypaflavine in the Treatment of Febrile Abortion

G. MARTINS (*Münchener medizinische Wochenschrift, 84:851, May 28, 1937*) notes that he has found trypaflavine given intravenously very effective in the treatment of febrile abortion. A 2 per cent. solution of trypaflavine is employed, giving an initial dose of 5 c.c., and increasing each subsequent dose by 5 c.c. up to 20 c.c. As a rule, however, he has not found it necessary to give more than two injections. The use of trypaflavine does not render the proper local measures for emptying the uterus unnecessary, although he has seen the temperature drop rapidly after the first injection of trypaflavine before the uterus was emptied. It is, however, a valuable adjunct to whatever local treatment may be indicated.

COMMENT

The author does not so state but it would seem that trypaflavine is a chemical germicide comparable to prontosil. If this is the case it should "work" as the author states. Prontosil does, provided the "bug" is a streptococcus, and thereby relieves the operator of a great deal of anxiety in these febrile abortion cases. If certain intravenous chemical germicides prove to be as specific as they now seem, infection will cease to be the terrible "bugbear" that it has hitherto been. Let us hope this is true!

H.B.M.

Hydatidiform Mole and Chorio-Epithelioma

A. MATHIEU (*Surgery, Gynecology and Obstetrics, 64:1021, June, 1937*) presents a study of cases of hydatidiform

mole and chorio-epithelioma recorded in the larger hospitals of the Pacific Coast in 1931 to 1936. Records of 127 cases of hydatidiform mole and 28 cases of chorio-epithelioma were collected for this study. In both conditions uterine bleeding, nausea and vomiting and painful uterine contractions were the chief symptoms. In the 127 cases of hydatidiform mole, pathological diagnosis was made from curettings (53 cases), from placental examination (one case), after study of the specimen following hysterectomy (one case); clinical diagnosis was made from the passed mole or vesicle (61 cases), from intermittent bleeding (2 cases), and in 13 cases because the uterus was enlarged with positive Aschheim-Zondek test, but no evidence of a fetus. There were only 3 cases in which a fetus was present with the mole. The Aschheim-Zondek test was done in only 56 of these cases of hydatidiform mole—in 28 during the molar pregnancy and in 28 after treatment. In this series the hydatidiform mole passed spontaneously in 46 cases; in 94 cases dilatation and curettage were done and in 29 cases a hysterectomy. The condition of the ovaries was noted in only 28 cases, in 14 of which lutein cysts were found. There were 3 deaths in this series and chorio-epithelioma developed in 12 cases (9.4 per cent.). Of the series of 28 cases of chorio-epithelioma, 15 followed hydatidiform mole, and 5 existed simultaneously with mole; 7 followed pregnancies or abortions, and one occurred with pregnancy. The Aschheim-Zondek test was done in 14 cases (50 per cent.), in 12 cases both before and after hysterectomy, and in 2 only after operation (both negative). Hysterectomy was done in 24 cases; 3 patients were treated by dilatation and curettage; one had a vaginal implantation removed. There were 2 deaths in this series, a mortality of 7.1 per cent., a much lower death rate than reported by Findley in 1917. The author emphasizes the importance of the Aschheim-Zondek test in the diagnosis of both hydatidiform mole and chorio-epithelioma; this test should be used also in the follow-up study of patients after operation. If repeated Aschheim-Zondek tests are done after operation for hydatidiform mole, and the reaction becomes and remains negative, it may be regarded as a certain indication that chorio-epithelioma will not develop. The author advises that this test be done daily after operation for hydatidiform mole until a negative reaction is obtained, and then weekly for a month, and finally monthly for a few times. Only in this way, he notes, "can one be sure as to the presence or absence of the growth."

COMMENT

Certainly the average obstetrician does not see a sufficient number of hydatid moles or choriomas to be of statistical value. Any collection of authenticated cases studied by an authority is therefore worth while. Besides the diagnosis, which is fairly simple nowadays, there remain the treatment and subsequent behavior of the case to be debated by most authorities. As regards treatment your commentator believes that thorough currettage—perhaps through an anterior hysterectomy incision—is sufficient for hydatidiform mole. He has treated a goodly number of such cases by this procedure and with good results. On the other hand, if chorioma is present, immediate wide and complete hysterectomy followed by deep x-ray therapy (modified Coutard) has been the method of choice. The mortality, for obvious reasons, in chorioma is very high with any type of therapy and the only hope of "cure" is early diagnosis before metastasis has taken place.

Repeated Aschheim-Zondek tests should be done on all these cases for from 6 to 8 months following operation—weekly at first; later monthly. Negative tests always assure absence of chorioma.

H.B.M.

Significance of Spirochetes in the Placenta

H. G. DORMAN and P. H. SAHYUN (*American Journal of Obstetrics and Gynecology, 33:954, June, 1937*) note that the general practitioner does not appreciate the difficulty of the diagnosis of syphilis in pregancy. In any woman syphilitic infection may occur without signs of primary chancre, rash or mucous patches, and the occurrence of pregnancy tends to attenuate the infection; the Wassermann reaction may be negative in the syphilitic pregnant woman. When a child is born of a syphilitic mother the infant may appear healthy and the Wassermann reaction may be negative in the cord blood, and yet congenital syphilis

may be present. The demonstration of spirochetes in the placenta, therefore, "becomes a matter of prime importance." The authors report a study of 145 placentas by a modification of the silver impregnation method. These placentas were selected from a total of 667 deliveries, because of a "suspicious history" or positive serum reactions in most cases, although there were a few without suspicion of syphilis. Spirochetes were demonstrated in 105 of these 145 placentas, this group included 29 cases in which syphilis was unsuspected before delivery. Of the children in these 105 cases, 32 were stillborn, 73 born alive, but 9 died soon after birth; of the total number 18 presented some abnormality. Half of the 105 patients gave a history of at least one previous abortion and one-fourth of the patients a history of repeated abortions. There were 30 patients in this group in which spirochetes were found in the placenta who had received antisyphilitic treatment during the pregnancy; but these patients had a higher percentage of apparently normal living babies than those who had not been treated. In discussing the appearance of the placenta as an indication of syphilis, the authors note that in sections stained with eosin and hematoxylin, the Warthin criterion, *i.e.*, blood-vessels showing mild peri- and endarteritis with plasma cell and lymphocyte perivascular inflammation, indicates the presence of syphilitic infection. In the silver impregnated sections, the spirochetes are to be sought for in and around foci staining a pale yellow and surrounded by a dark powdery deposit.

COMMENT

Pregnancy in the syphilitic woman is a very distinct hazard to the baby if not diagnosed and treated. When treated properly the hazard is reduced to zero in most instances. The usual methods of diagnosis are not infallible — and consequently we must "check and double check" on every suspicious case of syphilis and pregnancy. The authors call attention to the significance of spirochetes in the placenta as a means of diagnosis where other methods have failed. We have had no extended experience with this method of diagnosis but it sounds reasonable and therefore should be given a trial.

H.B.M.

Parathyroid Extract in the Control of Early Nausea and Vomiting of Pregnancy

WALTER SUSSMAN (*American Journal of Obstetrics and Gynecology, 33:761, May, 1937*) notes that the vomiting of early pregnancy is not a physiologic process, but indicative of some form of toxemia; if this mild type of toxemia does not abate, it may progress to more severe types of toxemia. In fatal cases of the early toxemia as well as the late toxemia of pregnancy the pathological findings show definite evidence of liver damage. Calcium therapy alone has been found of comparatively little value in the toxemias of pregnancy or other forms of liver damage; evidence indicates that the normal action of the parathyroid glands in maintaining the calcium balance is inhibited in such cases. The author has therefore used a combination of calcium and parathyroid extract in the treatment of the early toxemia of pregnancy with nausea and vomiting unusually severe or prolonged. In one group, calcium only was given by mouth and by intravenous injection (calcium gluconate); in a second group, calcium was given by mouth and parathyroid extract injected either intramuscularly or intravenously (100 units every two to three days). In the first group of 12 patients, the nausea and vomiting persisted for an average of 30.5 days after treatment was started; but in the second group of 88 patients, in which parathyroid extract was given with the calcium, the nausea and vomiting persisted only 11.2 days after treatment was instituted; most of these patients were in the first and second months of pregnancy. There were 3 other cases in which the calcium and parathyroid extract, as well as other methods of treatment, failed to control the nausea and vomiting completely, but no severe toxemia developed.

COMMENT

Since modern evidence points to the toxic origin of nausea and vomiting of pregnancy it follows therefore that early preventive measures should be employed. The parathyroids normally aid in maintaining calcium balance and in pregnancy this balance is inhibited, therefore the adminstration of parathyroid extract should give relief — partial or complete. We have had no ex-

perience with this form of therapy but intend to try it out "on our next case." If it works, what a thrill the patient will get! —and the doctor too.

H.B.M.

Macrocytic Anemia in Pregnant Women with Vitamin B Deficiency

K. O'S. ELSOM and A. B. SEMPLE (*Journal of Clinical Investigation, 16:463, May, 1937*) report a study of a group of 11 women who during pregnancy had a diet adequate in every respect except for vitamin B content (B complex) as determined by Cowgill's formula. All these women showed some definite clinical symptoms, the most important of which were glossitis and ulcerations of the tongue, impairment or loss of vibratory sense, edema, tachycardia, easily induced fatigue and paresthesias. They also developed anemia of a definite type indicative of bone marrow hyperplasia; it was characterized by decrease in the number of red cells, increase in the mean corpuscular volume and the mean corpuscular hemoglobin, macrocytosis, reticulocytosis, the appearance in the blood smear of many polychromatic cells, poikilocytes, and immature white cells. There was no characteristic change in the gastric acidity. The anemia and the other clinical symptoms noted were relieved by the administration of brewer's yeast or liver extract. In a control group of pregnant women receiving a diet adequate in every respect, none of the symptoms described developed. The substances responsible for the changes observed in pregnant women suffering from vitamin B deficiency cannot be definitely determined "until various factors now grouped together as vitamin B are identified and separately tested."

COMMENT

The "anemias of pregnancy" still remain an enigma to the physician. How to combat the almost routine occurrence of some degree of anemia in the pregnant patient is quite a problem and requires much thought and some therapeusis. A correct diet with sufficient vitamin B, coupled with a good preparation of iron and liver extract, has given us excellent results.

H.B.M.

A New Machine for Self Administration of Gas-Oxygen-Analgesia in Labor

A. BARR and A. TINDAL (*Lancet, 1:1271, May 29, 1937*) consider that gas-oxygen has advantages over all other methods of analgesia in labor, as it relieves the pain without being in any way dangerous to mother or child and without interfering with the frequency or strength of uterine contractions. They have designed a machine by which a woman in labor may administer the gas herself. It is low in cost, easily portable, has a mechanism that is easily understood and does not get out of order, and delivers a fixed proportion of nitrous oxide gas and oxygen—90 per cent. nitrous oxide and 10 per cent. oxygen. This concentration of nitrous oxide gives sufficient analgesia rapidly and the 10 per cent. oxygen is sufficient to prevent anoxemia. The apparatus is set up and filled by the attendant; the woman is instructed, when she feels a pain coming on, to make a full expiration, then place the face-piece over her nose and mouth, press the plunger valve and take a full inspiration — the following expiration passes back into the reservoir. She continues this process until the labor pain has ceased, then releases the plunger and removes the face-piece. It has been the authors' experience that when the analgesia is begun early enough, the patient becomes expert in the use of the apparatus and so assured of relief that she often sleeps naturally between pains. If sufficient relief is not obtained for the birth of the child, the nurse or medical attendant may apply the face-piece continuously with the plunger depressed to obtain sufficient analgesia; this procedure also allows episiotomy or insertion of perineal sutures to be done. In 100 cases in which this apparatus has been used, satisfactory analgesia was obtained in 92 per cent.; in 29 per cent. there was complete analgesia. None of the failures occurred in private practice, where the patients' cooperation was always excellent. There were no stillbirths in the series and no neonatal deaths, and in all cases the child cried vigorously at birth.

COMMENT

Nowadays there is no gainsaying the fact that all parturient women demand some form of analgesia—at least here in America. The attending physician is "put to it" in devising "ways and means" of satisfying this demand. We prefer to give by mouth or

hypodermically some one of our favorite analgesic and/or amnesic drugs rather than "bother" with the "self administration of gas-oxygen analgesia during labor." In the first place, it is easier and more satisfactory; second, self administration through the use of any apparatus is never quite sufficiently safe; and third, the length of time necessarily required for the administration of gas-oxygen, even only to the stage of analgesia, is not desirable. We have seen rather disastrous, although not lethal, accidents occur during the long self administration of gas-oxygen during labor. However, given by an experienced attendant, it is the safest of all inhalation analgesics or anesthetics and can be safely given for the actual delivery following any form of previous analgesia. Here, as elsewhere in medicine, "the method you know best is the best method for you to employ." The parturient woman demands relief; the method is not important so long as it is safe for her and her baby. ***H.B.M.***

Prognostic Value of the Cold Test in Pregnancy

J. F. BRIGGS and H. OERTING *(Minnesota Medicine, 20:382, June 1937)* report the use of the cold test (described by Hines and Brown in 1933) in pregnant women. The test was devised as a means of indicating a hypertensive tendency or latent hypertension, and would be of value in pregnancy only as indicating a tendency to toxemia of the hypertensive type. In using this test in 233 pregnant women of ages varying from sixteen to forty years, study was also made of the occurrence of hypertension in the family of the patient. In the group without familial hypertension, only 2 gave an abnormal (hyper) reaction to the cold test. In the group in which the one parent was hypertensive, 21 gave a normal reaction, 10 a hypo-reaction and 13 a hyper-reaction. Ten patients with a familial history of hypertension in both parents all gave a hypertensive reaction. No cases of toxemia of pregnancy of the hypertensive type developed in the patients giving normal or hypo-reactions to the cold test; toxemia of nephritic origin occurred twice in the normal group. Three patients out of the 13 showing hyper-reactions with one parent hypertensive developed hypertensive toxemia; 9 of the 10 hyper-reactors with both parents hypertensive developed hypertensive toxemia. These findings indicate that the cold test in pregnancy is of aid in determining what women are liable to develop hypertensive toxemia, so that the prenatal care can be adjusted on this basis.

COMMENT

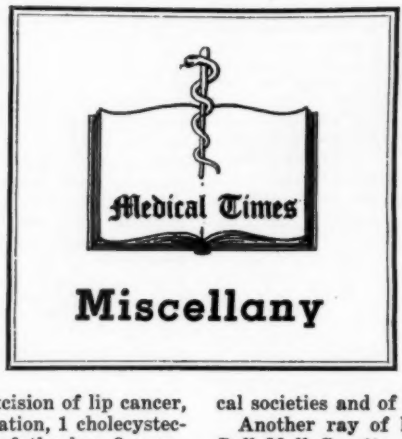
There is evidence at hand to indicate that certain persons have a constitutional or biologic abnormality which leads to the development of essential hypertension. In fact there has been devised a standard test—the cold test—by means of which those individuals who are likely sometime in the future to develop hypertension can be identified. This test has been in use in general medicine since 1933, although not very generally employed. In carrying out this test on 233 pregnant women Briggs and Oerting came to the conclusion that it was of some value in determining which women are liable to develop hypertensive toxemia. Your commentator has had no experience with the cold test but would welcome any aid that would give a clue to the possible development of toxemia during pregnancy. Certainly the positive test subjects could be more carefully watched during the prenatal period and the management adjusted accordingly. Thus "if and when" the cold test is more universally used by the obstetrician it should prove of distinct value in "spotting" those women likely to develop hypertensive toxemia during pregnancy. Another striking example of the help the obstetrician may obtain through close co-operation with the internist!

—H.B.M.

STUDY OF GONORRHEA

—Concluded from page 391

An entirely satisfactory treatment for gonorrhea has not yet been found; however, at present we are not as powerless against even complicated cases of this disease as we were a few decades ago.



A VERSATILE COUNTY PHYSICIAN

ESTHER EVERETT LAPE, in her recent article *The Health of the Nation*, which appeared in the *Atlantic Monthly* of April, 1937, described the work of a county doctor in a Middle-Western state who we suppose could be duplicated many times over, but who, none the less, is a versatile and resourceful personage in the best tradition of the American rural practitioner. This man is paid $1400 a year by the county, out of which he must buy gas and oil ($200 last year), as well as drugs and supplies ($365 in 1936). Besides caring for measles, mumps and rheumatism, the doctor, extracted 542 teeth, delivered 55 obstetrical cases, performed 5 hysterectomies and 72 other abdominal operations, did 25 tonsillectomies, 11 hemorrhoidectomies, 3 eye enucleations, 1 excision of lip cancer, 1 gastric cancer operation, 1 cholecystectomy, 1 amputation of the leg, 3 paracenteses of the ear, 3 thoracenteses, 1 herniorrhaphy, 1 prostatectomy, and cared for all kinds of dislocations and fractures, including a fractured hip.

This doctor can "take it." "Whatever the operation, he does it."

But the author of the *Atlantic Monthly* article figures out that the average fee for these operations is 8 1/3 cents!

ONE hears remarked all the time that the extremes of wealth and poverty in this country are appalling, but here is a professional extreme that is a bit terrifying to many of us who know very well that our work is probably not as good as this county doctor's, while at the same time we are paid extravagantly in comparison to him.

There is something wrong about the distribution of medical talent, along with other things.

OUR OWN MAORIS AND THEIR POSSIBLE CURE

A little over twenty years ago, says the London *Chronicle*, a Judge in New Zealand was obliged to issue an order to the effect that "in future singing would not be taken as evidence" in his court. It was the constant habit of the aboriginal inhabitants of the country, the Maoris, when pleading a cause, to sing long and quite poetic sagas. As these generally began with legends of their remote ancestors sometimes many hours, even days, would be spent before the point (probably trivial) was reached. There is something Gilbertian in this idea, says the *Chronicle*, but any old New Zealander could vouch for the facts.

Will some authority please issue an order restraining some of our Maoris of the medical societies and of Congress.

Another ray of hope comes from the *Pall Mall Gazette*, which some time ago described an apparatus devised by one Yamakava, whereby long-winded speakers may be painlessly and noiselessly removed from the platform. This "rough on bores" apparatus consists of pipes running from every seat in the hall and meeting under the floor of the platform just where the speaker stands. Each auditor is supplied with a certain number of lead balls for insertion in the pipes. The floor underneath the speaker is trapped in such a way that it can be set free when a certain number of the lead balls run into the receiver; this portion of the floor then disappears and takes the speaker with it. The balls make no noise as they run through the pipes into the central receiver. The surprise felt by the speaker who is becoming a bore, says the *Pall Mall Gazette*, is equalled by the delight of his long-suffering audience. This device ap-

peals strongly to us as essentially democratic in principle.

THE INDUCTION OF ABORTION: TWENTIETH CENTURY VIEWPOINTS REGARDING THE INDICATIONS

By P. Pecksniff Pinchbeck, M.D.

THE opening years of the twentieth century have seen a marked evolution in obstetric thought and practice. This evolution has made itself most evident in a certain wise liberalism in respect of our attitude toward the induction of abortion. The indications for such induction have broadened greatly, and the ultraconservatism of the past generation in this sphere of the art has come to seem to the twentieth century mind little short of medieval. Thus has the passage of less than a score of years witnessed a transformation of our obstetric conceptions and of our obstetric art.

The chief honor for breaking new ground in this field and ushering in a new era of advanced, epoch-making practice belong to Dinkelspiel, of Budweiseron the Stein, the distinguished obstetrician to the Hofbrau Maternity. With a courage and consecration little less than inspired, Dinkelspiel has boldly and insistently formulated and applied the foundational principles of the newer obstetrics. Upon the tablets of the Æsculapian temple his immortalized name is writ large.

The timid Faculty of the century that is passed, facing almost helplessly the apparently baffling problems of obstetric pathology, hesitating paretically in the presence of what seemed to them insolvable perplexities of practice, conceived but dimly, if at all, the momentous changes that we, both as spectators and participators, have seen occur in the science and art of midwifery. The induction of abortion for varicose veins of the lower extremities, or for hemorrhoids, would have been considered nothing short of malpractice by our benighted brethren of the last century, to say nothing of so-called moral and theological considerations. *Tempora mutantur, nos et mutamur in illis.* The last fetters have been struck from the hands of a hitherto ultraconservative profession, and the blind eyes of a pharisaical fraternity made to see the vision of the new art. We joyfully thank the gods while we weep for the sisterhood that lived and suffered and died deprived of the beneficent dispensation of today and the ministrations of the Dinkelspiellian disciples.

Without further introduction, the writer wishes to report a few cases which well illustrate, he thinks, the principles underlying the new order of things. This, he opines, will be better and in every way clearer than a technical discussion of such principles.

CASE I.—Fakington's complex. This patient presented the classical train of symptoms so admirably described by our distinguished Baltimore colleague and which he so eloquently pleads that the profession regard as always calling for interruption of pregnancy, provided the husband belongs not lower than class 2, schedule b, in Bradstreet's useful work, *The Metropolitan Practitioner's Vade Mecum.*

We may briefly detail the symptoms in these cases as follows: nocturnal nausea, swelling of the lobules of the ears, a peculiar coloration of the sclerotic—quite easily overlooked—and the occasional passage of a strongly urinous renal secretion which gives a pink reaction with P_4 D_{11} Q_{44}.

Our patient made a prompt recovery upon the fulfillment of the indications.

CASE II.—This lady's husband, every time she became pregnant, suffered from a peculiar psychosis which has been classified by Shooks and Bunk as a so-called grouch-state. This, in turn, occasioned much mental suffering in the wife, and therefore, in view of her disturbed, unhappy, and altogether unfavorable state of mind, it was considered wise to terminate the pregnancy. Recovery of both husband and wife supervened upon the operation.

The various psychoses, it will be seen at once, offer a very wide field for the application of the Dinkelspiellian principles; so, too, may we readily conceive of innumerable social indications, so to say, factors seldom or never taken into account in any deliberate fashion by our professional progenitors.

CASE III.—This lady had had an uncle die of nephritis a year before she became

pregnant. She consulted me when the gestation had progressed three months. Picklesauer has shown clearly the dangers to be apprehended under such circumstances as these; therefore the uterus was promptly emptied, in accordance with what would have been his judgment in the premises.

CASE IV.—This patient presented the condition so exhaustively studied by the buncombe school of obstetricians under the leadership of Crook and Moneypenny. Essentially, this is a justo-major pelvis with a straight, instead of a curved, birth canal; a condition, it will be seen, homologous with that existing normally in the mare and cow. Owing to the upright position of women, however, the subjects of this abnormality cannot carry to full term. P. Curlicue Fussie has pointed out that it is the assumption of the upright posture that has led to contraction of the pelvic brim and the curving of the birth canal, in order that the female may carry her young, and it is these alterations that have made labor in the human female so difficult.

It may be ingenuously asked, why induce labor in this class of cases if abortion be inevitable? Such a question betrays a total lack of appreciation of the subtle principles of the newer obstetrics. It cannot be expected that all should fully grasp these principles, and 'tis well.

Such questions cannot be answered offhand, anyhow. I shall devote a paper to the elucidation of all moot points at another time. In the meantime, send your cases to me, for with every day's delay you flirt with fortune.

—*Critic and Guide.*

DEVELOPMENT OF ACUTE HEMOLYTIC ANEMIA: DURING ADMINISTRATION OF SULFANILAMIDE (PARA-AMINOBENZENESULFONAMIDE)

During five months of intensive use of sulfanilamide in the treatment of streptococcic infections nothing untoward occurred, and, until the three cases of hemolytic anemia reported occurred, this new drug, potentially so toxic, seemed to be a relatively innocuous therapeutic agent as far as the patient was concerned. Two occurred during the treatment of streptococcic sore throat and one during the treatment of meningococcic meningitis with sulfanilamide. So far A. M. HARVEY and C. A. JANEWAY, Baltimore (*Journal A. M. A.*, July 3, 1937), have not been able to prove conclusively that the drug was responsible for the rapid hemolysis, but since no previous cases have been encountered in the hospital with similar infections and a fourth case of hemolytic anemia has occurred in Baltimore during the administration of sulfanilamide it seems fairly certain that the drug in some manner was responsible for the hemolytic crises. Whenever patients are being given large doses of the drug the blood picture must be carefully followed, especial attention being paid to the evidences of red blood cell destruction and regeneration such as reticulocytosis, the appearance of nucleated red blood cells and the presence of bile and urobilin in the urine, feces or blood. The anemia was promptly improved, and the symptoms disappeared after transfusions of citrated blood in these cases. Thus the treatment of this type of anemia is much more satisfactory than that of the aplastic type, which sometimes develops after the use of arsenical drugs. Two of the patients were given a small dose of the drug after recovery with no change in the blood picture.

OUR GOAL

Preventive medicine dreams of a time when there shall be no unnecessary suffering, and no premature deaths; when the welfare of the people shall be our highest concern; when humanity and mercy shall replace greed and selfishness; and it dreams that all these things will be accomplished through the wisdom of man.—Milton J. Rosenau, M.D., in the *Bulletin*, Kentucky State Department of Health.

A. M. A. ACTION ON PREVENTION OF CONCEPTION

—*Concluded from page 414*

the President is now empowered to appoint investigating juries to which the Judicial Council may refer complaints or evidence of unethical conduct which in its judgment are of greater than local concern. Such action will do much to maintain the high ideals of medical practice which represent the standard of the American Medical Association.

Understanding of some of the other problems which developed and with which the House of Delegates was concerned is clouded in some instances by the difficulty of ascertaining the exact facts concerning situations that have developed in governmental circles. Everything is being done that can be done to secure the necessary information on which the Board of Trustees may take suitable action in accordance with the responsibilities placed on it by the House of Delegates.—*Jour. A. M. A.*, June 26, 1937.

DINITROPHENOL AND DESICCATED THYROID IN THE TREATMENT OF OBESITY: COMPRESSIVE CLINICAL AND LABORATORY STUDY

A detailed study of the voluminous literature on dinitrophenol reveals surprising gaps in the knowledge of the drug. Although knowledge of the pharmacology and clinical actions of the drug rests on a secure footing, studies of its clinical pathology are woefully inadequate. Accordingly, SAMUEL SIMKINS, Philadelphia (*Journal A. M. A.*, June 19 and 26, 1937), presents clinical and laboratory studies on a group of 159 ambulatory obese patients who were selected at random and treated with dinitrophenol alone or in combination with desiccated thyroid. The effects of diet, combined with desiccated thyroid, were studied in twenty-two patients. The chief clinical effects of therapeutically effective doses of dinitrophenol are those of increased heat production. Tolerance to the drug is established rapidly, so that to produce a consistent loss of weight the dosage must gradually be raised. It is not unusual for a patient to cease losing weight suddenly after weeks of steady, satisfactory weight loss. Apparently two factors are chiefly concerned: acquired tolerance to the drug and a tendency of dinitrophenal to promote storage of water in the body. Dinitrophenol, in therapeutic dosage, is seemingly not a hepatotoxin, except in the extremely rare case in which there may exist an idiosyncrasy that may mediate damage to the liver. It does not impair kidney function or the cardiovascular system in ordinary clinical dosage. In estimating the effects of dinitrophenol on carbohydrate tolerance, the criteria used were first its effect on the fasting blood sugar and second its effect on the blood sugar following the ingestion of 100 Gm. of dextrose. With short courses of dinitrophenol administration in normal individuals, there is moderate elevation of the fasting blood sugar level (though not hyperglycemia) and a moderate impairment of carbohydrate tolerance in the majority of cases. With prolonged administration there is no change in the fasting blood sugar and a marked increase of carbohydrate tolerance. In diabetic patients, on short courses of dinitrophenol administration, the results

are variable, the dextrose tolerance being apparently increased as often as decreased with parallel changes in the fasting blood sugar. With prolonged administration in cases of diabetes there is apparently an increase of carbohydrate tolerance. In no case of a total of thirty-two cases of diabetes was there any evidence of toxicity. This lack of increased toxicity is in startling contrast with the currently held view. Gastro-intestinal complaints occupy only a minor field in dinitrophenol therapy. Cases of severe gastroenteritis, anorexia and vomiting are uncommon. The average increase in the basal metabolic rate is roughly 11 per cent for each 0.1 Gm. of the daily dose of dinitrophenol. In thyroid disease there is a striking inverse relationship between the level of the basal metabolic rate and the blood cholesterol concentration. This relationship does not hold between dinitrophenol and blood cholesterol. Blood cholesterol determinations were followed in five cases. No consistent results were obtained. The most common toxic action observed with dinitrophenol is a skin rash. In the present series there was a total of thirty-two patients who showed skin reactions. Of these, more than one type of skin lesion developed in a few patients: simple pruritus occurred in four patients, macular rashes developed in three patients, papular and maculopapular rashes developed in twelve patients, in four patients there were marked swelling and redness of the hand and feet; urticaria occurred in ten patients, and in the tenth week of dinitrophenol therapy one patient developed an eruption simulating pityriasis rosea. Alopecia developed in one patient. A search of the literature discloses no other case of alopecia. There were only four frank cases of peripheral neuritis. The symptoms developed very gradually in all, and only after prolonged medication (from the fourth to the tenth week). The condition persisted for weeks and gradually cleared up after the medication was discontinued. In five patients loss of taste developed, especially for salt, sweet, sour and the like, as well as numbness and tingling of the tongue, usually within the fifth to the seventh weeks. In no case was the drug interdicted. In one patient the loss of taste lasted only two days, in another five days; in the other three patients it persisted several weeks, disappearing spontaneously even though the drug was continued. No clinical cases of agranulocytosis developed. Eleven patients were studied carefully with repeated, complete blood counts during prolonged courses of dinitrophenol medication, without any significant changes being noted. Eighteen women complained of feeling "bloated" shortly before or during their menses. Of the eighteen, only six gained weight at the time of the catamenia. In the entire series a total of fourteen gained weight at the time of the menses. Ten were given dinitrophenol exclusively, and four 2 grains (0.13 Gm. of desiccated thyroid daily in addition to the dinitrophenol. The gain in weight was variable, ranging from 2 to 5 pounds (0.9 to 2.3 Kg.). After the menses were over, the increment in weight was usually lost rapidly. The *bête noire* of dinitrophenol therapy is cataracts. Even now, with the evidence pointing to dinitrophenol as the causative agent of these cataracts, many deny the rôle of the drug. In a case of cataracts complicating dinitrophenol therapy, somewhat encouraging results were obtained with vitamin C therapy. Other toxic side-actions, such as generalized pains and weakness, were observed. With dinitrophenol alone, 20.3 per cent of patients (twelve of fifty-nine) lost no weight. The average loss of weight for the remainder (forty-seven patients) was 11.1 pounds per patient, with an average rate of weight lost of 2.1 pounds weekly. The addition of 2 grains (0.13 Gm.) of desiccated thyroid daily produced a marked increase in dinitrophenol effectiveness, no failure of reduction occurring in this group. The average weight loss in this group was 11 pounds per patient, with an average rate of loss of 2 pounds a week. The group treated with diet and desiccated thyroid lost ar average of 15 pounds, with an average rate of weight loss of 1½ pounds a week. One patient lost 140 pounds (63.5 Kg.) in eighty-four weeks. During that time she took 254.6 Gm. of sodium dinitrophenol with no ill effects. The indiscriminate clinical use of dinitrophenol should be discontinued until the vexing problem of cataracts complicating dinitrophenol therapy is solved.

Medical Book News

* All books for review and communications concerning Book News should be addressed to the Editor of this department, 1313 Bedford Avenue, Brooklyn, New York.

Edited by TASKER HOWARD, M.D.

Care of Surgical Patients

PREOPERATIVE AND POSTOPERATIVE TREATMENT. By Robert L. Mason, M.D. Philadelphia, W. B. Saunders Company, [c. 1937]. 495 pages, illustrated. 8vo. Cloth, $6.00.

This is an excellent presentation of the views of a group of Boston surgeons regarding a part of our surgical treatment which is badly in need of emphasis.

It is well arranged with the first part covering the preparation of the good and bad risk, the choice of anesthetic, and most of the postoperative complications. The second part is a regional presentation of the preoperative and postoperative care of patients suffering from the usual surgical diseases.

The book will be of considerable value to surgeons and especially to the surgical house officer.

EDWARD P. DUNN.

HERBERT SPENCER
1820 ~ 1903

Classical Quotations

● "It must be noted that, though the most evolved organism is less fertile numerically, it is virtually more fertile, since its fewer offspring are more fitted to survive."

Herbert Spencer (1820-1903).
Principles of Biology, 1864.

Industrial Medicine

TRAUMA AND DISEASE. Edited by Leopold Brahdy, M.D., and Samuel Kahn, M.D. Philadelphia, Lea & Febiger, [c. 1937]. 613 pages, illustrated. 8vo. Cloth, $7.50.

Both editors have had extensive experience in "Trauma and Disease". They have considered the subject from the rôle of a single trauma in the production or aggravation of disease.

Trauma is discussed in relation to gynecologic and obstetric conditions, genitourinary diseases, diseases of the gastrointestinal tract, peripheral vascular diseases, mental disorders, diseases of the thyroid gland, diabetes mellitus, neoplasms, pulmonary diseases, septicemia, chronic diseases of the joints, diseases of the nervous system, diseases of the bones, neurosyphilis, diseases of the spine, and diseases of the heart. The various chapters have been written by physicians who are recognized specialists in their respective fields.

The book is highly recommended to all physicians, especially in this day when compensation and medicolegal practice is assuming such a prominent place in medicine.

IRVING GRAY.

Facts and Fiction

THE QUEEN'S DOCTOR. Being a Strange Story of the Rise and Fall of Struensee, Dictator, Lover and Doctor of Medicine. By Robert Neumann. New York, Alfred A. Knopf, [c. 1936]. 401 pages. 8vo. Cloth, $2.50.

This is the strange story of the rise and fall of Frederick Struensee, dictator, lover and doctor of medicine, an exciting historical novel translated from the German. Christian the Mad, King of Denmark, and his beautiful queen Matilda, sister of George the Third of England are completely in the hands of a doctor who, through an amour with

the lovely queen, is head of the State and the most powerful dictator in Europe, until a coup d'état of the feudal lords carries him, loaded with chains, to the executioner. Kings and queens, daggers and swords, intrigue, and innumerable love affairs crowd the pages of the book, which the reviewer read in one evening without laying it down. The story does not drag for a moment. No tale of an imaginary Graustark, the historical events are of themselves dramatic. The author has found himself of sufficient literary importance to have his works burned in the great Nazi bonfire. It is highly recommended as a novel.

CHARLES A. GORDON.

Phenanthrene Chemistry Brought Up to Date

THE CHEMISTRY OF NATURAL PRODUCTS RELATED TO PHENANTHRENE. By L. F. Fieser. Second edition. New York, Reinhold Publishing Corporation, [c. 1937]. 456 pages, illustrated. 8vo. Cloth, $7.00.

The ready acceptance of the first volume has within a year of its publication, resulted in a demand for a second edition. This demand has been satisfactorily answered by the author, who has added an appendix to the first edition. The index includes both the first edition and its appendix. Ninety new pages of the comprehensive and salient features of articles appearing up to January 1, 1937, have been added to the already well established first edition. Marked activity in the field of phenanthrene chemistry precludes the possibility, in this short review, of mentioning the numerous additions that have been made. Suffice it to say, an already well received work is now brought up to date.

It is to be hoped that the author will add a new appendix yearly, so that this comparatively new and most interesting field will be kept up to date by a noted authority in the field.

ABRAHAM R. KANTROWITZ.

Vaccine Treatment of Thyroid Disease

CONQUEST OF GOITER. By Emilian O. Houda, M.D. Tacoma, Conrad Printing Company, [c. 1936]. 157 pages, illustrated. 16mo. Cloth.

This monograph is written "in language free of scientific terms which merely mesmerize readers into the belief that they postulate basic facts that have never been established."

Goiter is considered as any enlargement of the thyroid gland. The etiology is bacterial infection; the organisms can be cultured only by placing the gland tissue on media in a test tube, which is then sealed by drawing the tube out in a flame to form a sealed ampule with complete exclusion of nascent oxygen. These cultured organisms fulfill all of Koch's Postulates.

The treatment of goiter, with the exception of cancer of the thyroid, is by the use of antigoiter vaccine, a suspension of killed bacteria, given in ascending doses by injection. Eighteen brief case records are given in which this vaccine treatment was used.

We are not sure whether the author has written this for the lay reader or for the medical profession.

At the front of the book are listed "other articles of the author published during a period of the last eight years," without giving the journals or publications in which they appeared.

PAUL C. ESCHWEILER.

For the Arthritic Patient

ARTHRITIS AND RHEUMATIC DISEASE. By Maurice F. Lautman, M.D. New York, McGraw-Hill Book Company, Inc. [c. 1936]. 177 pages, illustrated. 8vo. Cloth, $2.00.

The main purpose of this work, in the words of the author, "is to give the patient who is threatened with arthritis, or who is already suffering from the disease, sufficient information pertaining to the causes and treatment of his trouble to enable him to determine whether or not the treatment which he is receiving is adequate and intelligent, and to place him in a better position to judge whether or not he is making favorable progress." In the reviewer's opinion, this purpose has been adequately accomplished.

The work covers in brief, such theoretical aspects of the disease as the average victim hurls in questions at his medical attendant. The nature of the disease is well pictured. Evaluation of the various methods of treatment is presented. Vaccine therapy is fairly considered. The theory of sensitization to bacterial products, rather than that of bacterial infection in the ordinary sense is opportunely mentioned. Not only the patient, but conceivably the physician might profit by this book.

GEORGE E. ANDERSON.

Elementary Biochemistry

PHYSIOLOGICAL CHEMISTRY. By J. F. McClendon, Ph.D., and the late C. J. V. Pettibone. Sixth edition, revised and enlarged. St. Louis, C. V. Mosby Co., [c. 1936]. 454 pages, illustrated. 8vo. Cloth, $3.50.

This book is elementary in its content, yet it covers all basic facts for the student in chemistry, biochemistry and general physiology, nutrition, foods and vitamins. The book has two parts, the first embraces theory, and the second laboratory technique. In part two carbohydrate and protein metabolism is described with all tests necessary for general work.

There is an appendix consisting of weight tables, glossary and references.

This book is well written, attractively bound, and should be handy as a student manual.

M. ANT.

Aeroplane View of Disease

AN INTRODUCTION TO MEDICAL SCIENCE. By William Boyd, M.D. Philadelphia, Lea & Febiger, [c. 1937]. 307 pages, illustrated. 8vo. Cloth, $3.50.

The aim of this book appears well attained in stimulating interest and understanding, as well as providing an adequate perspective for beginners and fringe-workers in the field of medicine. The author has successfully furnished this "aeroplane view of disease" in his usual cogently simple and attractive style. He discusses the principles of disease, the diseased organ, and practical applications, such as preventive and laboratory medicine. The illustrations are clear, mostly diagrammatic, and highly relevant. The book consists mainly of general and organic pathology correlated with clinical changes, and should be of marked service primarily to pre-medical students, nurses, and medical technicians in any field.

IRVING M. DERBY.

Gastrointestinal Physiology

ABSORPTION FROM THE INTESTINE. By F. Verzár, assisted by E. J. McDougall, Ph.D. New York, Longmans, Green & Co., [c. 1936]. 294 pages, illustrated. 8vo. Cloth, $9.00.

In a book of less than three hundred pages the author, who is professor of physiology at Basle, has given a concise but comprehensive summary of experimental work that has been done in this important subject, including description of his own extensive work along this line. It is highly technical in character, a reference book for the research worker in this field. A chapter on "The Sites of Absorption", shows how all researches point to the remarkable rapidity of absorption from the duodenum, which is the principal absorption site in the body. Later chapters are devoted to a discussion of the site, mechanism and rapidity of absorption of all the different constituents of a diet. This book should be in every gastrointestinal research laboratory and should be studied by those interested in problems of nutrition.

ALBERT F. R. ANDRESEN.

Popularizing Mental Analysis

PSYCHOANALYSIS EXPLAINED. By Dorothy R. Blitzsten. New York, Coward-McCann, Inc., [c. 1936]. 66 pages. 12mo. Cloth, $1.00.

This book is an attempt to explain psychoanalysis to intelligent people who have no knowledge of it. In brief outline, the author discusses the subject under the following headings: Why Be Analyzed, How Psychoanalysis Works, How It Is Done, Who Is the Analyst, Whence Comes Psychoanalysis.

The author has written a work that should interest and enlighten all who desire to know something about the subject.

IRVING J. SANDS.

Laboratory Manual on Histology

HISTOLOGICAL TECHNIC. A practical handbook for the workers in Histology or Histopathology laboratories, which describes in compact form, improved methods for the preparation of microscopical sections. By Aram A. Krajian. Los Angeles, Aram A. Krajian, 3320 Ganahl Street, [c. 1936]. 217 pages, illustrated. 8vo. Cloth, $3.50.

Mr. Krajian's book is an exceedingly practical handbook, and will be found useful in any laboratory where histological technique is practiced. It is a compact manual containing those methods used routinely and many of Mr. Krajian's own modification. The special, but less frequently used stains, have not been neglected. Suggestions concerning general laboratory equipment and miscellaneous methods have also been included.

MARGARET M. HEWES.

Problems in Communication

READING, WRITING AND SPEECH PROBLEMS IN CHILDREN. A Presentation of Certain Types of Disorders in the Development of the Language Faculty. By Samuel Torrey Orton, M.D. New York, W. W. Norton & Company, [c. 1937]. 215 pages, illustrated. 8vo. Cloth, $2.00.

The development of speech passes through various stages, the babbling stage, then the echo stage, and finally, through the additional use of nouns and verbs, into sentences, so that by school age a child has a vocabulary of several thousand words. On this foundation new language forms, such as reading and writing, develop.

To understand the difficulties encountered by certain children in learning spoken and written language, it is necessary to realize first, that the locus of brain involved is much more important than the amount of brain tissue destroyed, and secondly, that one side of the brain is of major importance in the development of language to the almost complete exclusion of the other side. To determine cerebral dominance, tests, involving handedness, eyedness and footedness are used. Special conditions such as, strephosymbolia, developmental agraphia, developmental word deafness, developmental motor aphasia, and stuttering are described. In the following chapters a neurological interpretation of the different disorders is presented, also, the treatment and process of retraining the individual. There is a glossary with definitions of terms used.

This book represents a summation of over ten years' study. While somewhat technical, it should be of profit to the practitioner interested in any of these problems.

STANLEY S. LAMM.

Nutrition of Children

FEEDING OUR CHILDREN. A Simple and Understandable Exposition of the Principles of Nutrition, together with their Practical Application to the Task of Planning Meals for the Various Ages. By Frank Howard Richardson, M.D. New York, Thomas Y. Crowell Company, [c. 1937]. 159 pages. 12mo. Cloth, $1.00.

Dr. Richardson has fully established his reputation as a popularizer of common knowledge—common, at least, to his trained fellows.

The advice offered is "authentic", i. e., that given by the great majority of sensible pediatrists and not faddish. It is offered in easy and interesting language, and so the little book can be cordially recommended to the mothers who need it.

WALTER D. LUDLUM.

For the Obstetrician

THE MANAGEMENT OF OBSTETRIC DIFFICULTIES. By Paul Titus, M.D. St. Louis, C. V. Mosby Co., [c. 1937]. 879 pages, illustrated. 8vo. Cloth, $8.50.

In this work Titus has made a contribution that should occupy an important place in the library of both specialist and general practitioner. Although written primarily for the former, it will prove of value to the latter. The orderly arrangement of material and the manner in which it is written make the reading of this book a pleasure. The illustrations are excellent and thoroughly descriptive, those depicting operative procedures particularly so. The fearless expression of opinion on controversial points inspires an admiration for the author, especially when it is considered that the sounder view is invariably advocated.

Outstanding are chapters on Toxemia of Pregnancy and Forceps—the later void of all but the most pertinent data.

Specifically of interest to the reviewer are the author's recommendations of treatment of shock before operation in ectopic; the use of a firm pack in the uterus after delivery in all cases of abruptio placentae; external cephalic version in breech presentation just before or at the onset of labor; and extraction of the breech.

Conservative obstetrics are evidently the author's bywords and where radical procedures are advocated, warnings of the dangers accompanying such procedures are given with emphasis.

This volume based upon the extensive experience of Titus is highly recommended to all who encounter obstetrical problems.

WILLIAM C. MEAGHER.

Vertebral Architecture

BONES. A Study of the Development and Structure of the Vertebrate Skeleton. By P. D. F. Murray, M.A. New York, The Macmillan Company, [c. 1936]. 203 pages, illustrated. 12mo. Cloth, $2.50.

The purpose of this work is to present in a concise, definite form the develop-

ment and structure of the bony skeleton as it is known today. Most of the book is given over to the embryonic and post embryonic development and the structure of the normal and modified bony skeleton in relation to its function. There is also a consideration in the same manner of cartilage. The work closes with the problem of mechanism in its effect on the architecture of bone. At the end is an excellent list of references.

The author definitely presents the facts under consideration in a clear-cut manner, covering our present knowledge of bone development.

JAQUES C. RUSHMORE.

Italian Medicine Today as Seen by a Surgeon

LIFE AND DEATH. The Autobiography of a Surgeon. By Andrea Majocchi. Translated by Wallace Brockway. New York, Knight Publications, [c. 1937]. 300 pages. 8vo. Cloth, $2.75.

An autobiography by Italy's outstanding surgeon of today reveals, in a natural conversational form, the situation of medicine as practiced in Italy at the present time. The simple way of presenting his own relation to the narrative is what gives the book its charm. No egotistic element is set forth in the entire volume. The contrast, as to the approach and the handling of each type of case in Italy and elsewhere, is cleverly set forth. The field covers first that of obstetrical and gynecological problems to which the author gave the earlier period of his life. Later, a wider vision of his possibilities, led him into the realm of surgery, in which field he has made himself famous as a teacher and authority. The unassuming way of presenting his relation to the changes taking place is remarkable and his whole conception of the dignity and responsibilities in practicing medicine is appealing. Here is a book that rests one while reading.

EUGENE W. SKELTON.

For the Young Practitioner

AN INTRODUCTION TO GENERAL PRACTICE. By E. Kaye LeFleming, M.D. Baltimore, William Wood & Company, [c. 1936]. 150 pages. 16mo. Cloth, $2.00.

This is a readable and interesting account of problems encountered during the first year of general practice, with advice to young doctors written by the Chairman of the Council of the British Medical Association. Five of the twelve chapters may be read with profit by Americans. The section on Doctor and Patient is extremely good. Most of the book, however, excellent as it is, deals with situations encountered only in England and therefore holds little interest for American readers.

MILTON PLOTZ.

A Practical Therapeutic Manual

MODERN TREATMENT AND FORMULARY. By Edward A. Mullen, M.D. Philadelphia, F. A. Davis Company, [c. 1936]. 408 pages. 8vo. Cloth, $4.75.

This is a practical manual on the treatment of diseases and symptoms arranged alphabetically, making it handy for the busy practitioner.

Some diet lists and tables on differential diagnosis enhance the value of the book.

CHARLES SOLOMON.

Vaccine Therapy

TUBERKULOSE UND VAKZINATION BAZILOSE BAZILIN. By Dr. A. K. Bosman and Dr. Ir. J. Pohlmann. Leiden, Verlag Von M. Dubbeldeman, [c. 1936]. 34 pages. 8vo. Paper.

This little book is the result of the combined research of the authors, who are confirmed believers in vaccine therapy, especially as a prophylactic measure. They have produced a new vaccine for the treatment of tuberculosis, which from animal experimentation they claim is worthy of trial on human beings. It deserves careful scrutiny and should be of interest to both laboratory workers and clinicians.

J. M. VAN COTT.

The New National Health Series

NATIONAL HEALTH SERIES. Twenty volumes, some completely revised, the others published for the first time. Prepared under the auspices of The National Health Council and written by leading health authorities. ADOLESCENCE by Maurice A. Bigelow, Ph.D.; HOW TO SLEEP AND REST BETTER by Donald A. Laird, Ph.D.; LOVE AND MARRIAGE by T. W. Galloway, Ph.D.; EXERCISE AND HEALTH by Jesse F. Williams, M.D.; FOOD FOR HEALTH'S SAKE by Lucy H. Gillett, B.S.; HEAR BETTER by Hugh G. Rowell, M.D.; CANCER by Francis C. Wood, M.D.; DIABETES by James R. Scott, M.D.; THE EXPECTANT MOTHER AND HER BABY by R. L. DeNormandie, M.D.; TAKING CARE OF YOUR HEART by T. Stuart Hart, M.D.; THE HEALTHY CHILD by Henry L. K. Shaw, M.D.; THE COMMON COLD by W. G. Smillie, M.D.; THE COMMON HEALTH by James A. Tobey, Dr.P.H.; WHAT YOU SHOULD KNOW ABOUT EYES by F. Park Lewis, M.D.; TUBERCULOSIS by H. E. Kleinschmidt, M.D.; WHY THE TEETH by Leroy M. S. Miner, M.D.; YOUR MIND AND

YOU by Geo. K. Pratt, M.D.; STAYING YOUNG BEYOND YOUR YEARS by H. W. Haggard, M.D.; THE HUMAN BODY by Thurman B. Rice, M.D.; VENEREAL DISEASES by William F. Snow, M.D. New York, Funk & Wagnalls Company, [c. 1937]. 16mo. Cloth, 35c per copy.

This edition is indeed an advance over that published several years ago. Although each little volume is complete in itself, yet all are so closely interrelated that what the reviewer may think of one holds equally true of the others, so that a composite statement better expresses the true value of this edition. Each book deals completely and thoroughly with the subject. The author of each volume presents his subject in such a way that it is simply, yet thoroughly stated, and is therefore, understandable to the older as well as the younger adult. A complete series of these booklets should occupy a place in every physician's office in order that they may be made available to patients interested.

To those of us who address lay audiences on medical subjects a set of these little books will prove most valuable as a source of information. The contents offer a style which the speaker may adopt as a pattern for his own talks.

SAMUEL ZWERLING.

BOOKS RECEIVED

Books received for review are promptly acknowledged in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

ELECTROCARDIOGRAPHY. By Chauncey C. Maher, M.D. Second edition. Baltimore, William Wood & Company, [c. 1937]. 254 pages, illustrated. 4to. Cloth, $4.00.

LEGAL MEDICINE AND TOXICOLOGY. By Thomas A. Gonzales, M.D., Morgan Vance, M.D., and Milton Helpern, M.D. New York, D. Appleton-Century Company, [c. 1937]. 754 pages, illustrated. 4to. Cloth, $10.00.

SHORT-WAVE DIATHERMY. By Tibor de Cholnoky. New York, Columbia University Press, [c. 1937]. 310 pages, illustrated. 8vo. Cloth, $4.00.

SURGICAL ANATOMY. By Grant Massie, M.B. Third edition. Philadelphia, Lea & Febiger, [c. 1937]. 468 pages, illustrated. 8vo. Cloth, $6.50.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, etc. Edited by Louis Hamman, M.D. Volume II, Forty-Seventh Series, 1937. Philadelphia, J. B. Lippincott Company, [c. 1937]. 315 pages, illustrated. 8vo. Cloth, $3.00.

INFANTILE PARALYSIS AND CEREBRAL DIPLEGIA. Methods Used for the Restoration of Function. By Elizabeth Kenny. Sydney, Australia, Angus & Robertson, Ltd., [c. 1937]. (Philadelphia, P. Blakiston's Son). 125 pages, illustrated. 8vo. Cloth, £1-1-0.

REPORT OF THE HOSPITAL SURVEY FOR NEW YORK. A Description of the Institutions and Agencies Concerned with the Organized Care of the Sick in the New York Metropolitan Area, with Analysis of Their Use and Cost, and Consideration of Plans for the Future. Presented to the Survey Committee by Its Study Committee. Volume II. New York, United Hospital Fund, [c. 1937]. 1246 pages. 8vo. Cloth.

THE NORMAL ENCEPHALOGRAM. By Leo M. Davidoff, M.D., and Cornelius G. Dyke, M.D. Philadelphia, Lea & Febiger, [c. 1937]. 224 pages, illustrated. 8vo. Cloth, $5.50.

THE LARYNX AND ITS DISEASES. By Chevalier Jackson, M.D., and Chevalier L. Jackson, M.D. Philadelphia, W. B. Saunders Company, [c. 1937]. 555 pages, illustrated. 8vo. Cloth, $8.00.

PERSONAL HYGIENE. By C. E. Turner, Dr.P.H. St. Louis, C. V. Mosby Company, [c. 1937]. 335 pages, illustrated. 8vo. Cloth, $2.25.

CLINICAL REVIEWS OF THE PITTSBURGH DIAGNOSTIC CLINIC. Guideposts to Medical Diagnosis and Treatment. Edited by H. M. Margolis, M.D. New York, Paul B. Hoeber, Inc., [c. 1937]. 552 pages. 8vo. Cloth, $5.50.

THE ENDOCRINES IN OBSTETRICS AND GYNECOLOGY. By Raphael Kurzrok, M.D. Baltimore, Williams & Wilkins Company, [c. 1937]. 488 pages, illustrated. 8vo. Cloth, $7.50.

THE INTERNATIONAL MEDICAL ANNUAL. A Year Book of Treatment and Practitioner's Index. Editors: H. Letheby Tidy, M.D., and A. Rendle Short, M.D. Baltimore, William Wood and Company, [c. 1937]. 605 pages, illustrated. 8vo. Cloth, $6.00.

THE MENTALLY ILL IN AMERICA. A History of Their Care and Treatment from Colonial Times. By Albert Deutsch. Garden City, Doubleday, Doran & Company, [c. 1937]. 530 pages, illustrated. 8vo. Cloth, $3.00.

You may obtain any of the books reviewed in this department by sending your remittance of the published price to Book Department of the MEDICAL TIMES, 95 Nassau Street, New York, N. Y.